

# Gas Detection.



# Catalog 2026

Gas Detection Systems for Buildings, Industry and Marine







## Dear business partners,

We are moving forward with confidence and look forward to setting new standards in gas warning technology together with you. Your trust, experience, and honest feedback are extremely valuable to us – they inspire us every day and flow directly into the further development of our products and services.

A special step in this process is the launch of our new web shop [www.gasdetection.shop](http://www.gasdetection.shop). For us, it is much more than just a shop: it stands for clarity, transparency, and modern, intuitive user guidance. Our new product series are deliberately placed at the center of attention so that you can find the right solution for your projects even faster.

At the same time, we look back with gratitude and pride on the improvements we were able to implement in 2025 – which we present to you in a compact form starting on page 10. There you will find an overview of our current highlights and a first glimpse of what we have in store for you in 2026

We are particularly pleased about the growth of our international network. In addition to our eight branches worldwide and numerous partners, we are about to open a new branch in France – and we will also be opening another branch in the UAE in 2026. They expand our team with dedicated colleagues who share our values and further strengthen our proximity to you. With each new branch, we are shortening distances, creating more personal exchanges, and enabling us to support you even more directly.

Together with our growing team, we are continuing to drive MSR-Electronic forward – with commitment, openness, and the desire to constantly deepen our dialogue with you. With all these developments, we are demonstrating how important our collaboration with you is to us and that we are consciously shaping this path together with you.

Thank you for your trust.

With kind regards,



Harald Schmitt  
CEO



# Company

Values, distribution and approvals



# PolyGard®

Products for buildings



# PolyXeta®

Products for industry



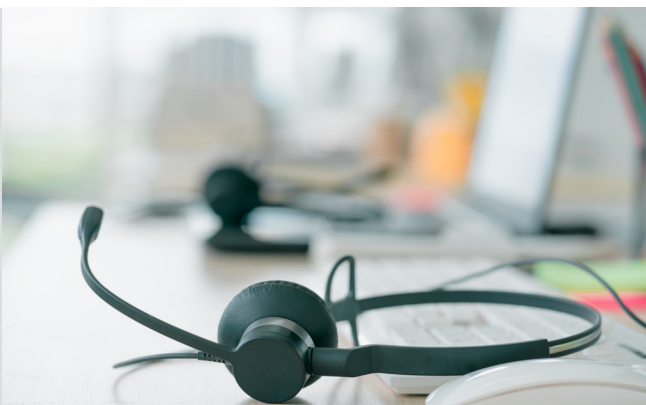
# PolyMarine®

Products for shipping and offshore



# Services

Shop, OEM, How-to videos, and MSR Academy



# Table of Contents

Values of the company .....	4
MSR-Group .....	5
Worldwide distribution .....	6
Certificates .....	7
<b>Highlights, outlook, and products .....</b>	<b>9</b>
<b>Product series .....</b>	<b>11</b>
<b>PolyGard® .....</b>	<b>14</b>
Sensors and boards .....	16
Controller and modules .....	23
PolyGard® Cloud Control .....	30
<b>PolyXeta® .....</b>	<b>33</b>
Sensors .....	35
Controller and module .....	38
<b>PolyMarine® .....</b>	<b>40</b>
<b>Accessories .....</b>	<b>41</b>
<b>Applications .....</b>	<b>47</b>
MSR-Traffic .....	48
Parkplatztechnik.shop .....	51
<b>Products and services .....</b>	<b>52</b>
Product matrix .....	53
Product abbreviations .....	54
Webshop .....	55
OEM products .....	56
The MSR video world .....	57
Maintenance and calibration .....	58
MSR Academy .....	59



# With the values of a family business

The globally operating company MSR-Electronic combines modern corporate management with the values of a family business. Thanks to its global sales network, MSR-Electronic has long standing customer relationships that are characterized by reliability and mutual trust.

## Reliability

Thanks to our international partner network, we have long-standing customer relationships that are characterized by reliability and mutual trust. This enables us to guarantee the worldwide distribution of standardized quality products and processes.

## Innovation

Our highly specialized team of engineers and technicians from the MSR development department develops solutions for practical and project-related challenges based on a solid foundation of theory and decades of experience. In our own EMC laboratory at MSR-Electronic, important tests are carried out quickly and efficiently.

## Quality

With the ISO 9001 certification (quality management), we have been guaranteeing our customers, among other things, a well-functioning risk management and transparent, documented processes for many years. In order to constantly approach our goals and optimize all management systems, we rely on the continuous improvement process (CIP).

When you choose safe solutions and products from MSR-Electronic, you benefit from many advantages such as quality and availability, competitiveness of the products, responsibility towards customers and business partners as well as openness to new requirements.

## Sustainability

With ISO 14001 (environmental management) and ISO 50001 (energy management) certifications, we are consciously committed to environmentally friendly and energy-conscious operation and production. Not only is power consumption optimized and significantly reduced year after year, but the use of plastic in production is also minimized. Our climate protection and environmental officer actively ensures that we set an example.

## Responsibility

Supporting children and young people is particularly close to our hearts. In addition to sports clubs and other social projects, we provide financial support to associations such as Intensivkinder sinnvoll helfend e.V., Kinderhilfe Holzland e.V., and Pockinger Tafel.

## Transparency

MSR-Electronic is committed to uncompromising integrity and high standards of business conduct. The focus is on an honest and transparent working environment in which all employees can voice doubts or concerns without fear of repercussions.

Expert in gas detection

Dynamic and individual solutions for the market

**Made in Germany**

Modularity in a diverse product range

**Fast response time through direct contact with experts**

Sales & support in various languages

**Reliable and consistently short delivery times**

High product quality and standards with international norms

Lean development process according to SIL for safe and innovative products

**OEM products**

Know-how from production, development and sales at one location

**Flexible X-Change system of sensors**

Contact person on site

International partner network and own branches

**MSR-Electronic stands for „Full of Innovation“**

Family business with organic growth

**MSR-Academy:** Extensive webinar and training program for partners and customers

Web shop for easy product selection around the clock

**Competitive prices**

Exhibitor at international trade fairs

Self-criticism – knowing what is good, but also where improvement is needed





# MSR-Group

Everything under one roof.

The MSR Group unites innovative companies from the electronics sector. Whether gas warning systems, parking guidance systems or sensor technology for building automation – the products can be found in many commercial and industrial applications, such as parking garages, laboratory and medical technology, bio-gas plants and in H2 production.

## GAS DETECTION.

For reliable gas monitoring and the detection of gas leaks, MSR-Electronic offers fixed gas warning systems with exchangeable sensor heads, controllers and warning devices for buildings, industrial plants and shipping.

[www.msr-electronic.de](http://www.msr-electronic.de)

## ELECTRICAL INSTALLATIONS.

VOLTA is a competent partner for modern electrical installations in the fields of building technology, e-mobility, and photovoltaics. It offers tailor-made solutions for private and commercial customers – from planning and installation to maintenance.

[www.team-volta.de](http://www.team-volta.de)

The MSR-Group stands for sustainable innovations and investments from a variety of industries and valuable real estate projects. Openness for new product areas and challenges characterize the MSR-Group.

Thanks to its innovative way of thinking, the company is established on the global market.

## PARKING TECHNOLOGIES.

MSR-Traffic stands for intelligent parking guidance systems. With magnetic field sensors, cameras, ultrasonic sensors and state-of-the-art LED displays, the company offers innovative products and solutions for parking space search and monitoring.

[www.msr-traffic.de](http://www.msr-traffic.de)

**MSR**  
GROUP

**MSR**  
ELECTRONIC

**MSR**  
TRAFFIC

VOLTA

Other business areas and investments of the MSR-Group

[www.msr-group.eu](http://www.msr-group.eu)

 **MSR IMAGEFILM**  
Made in Germany

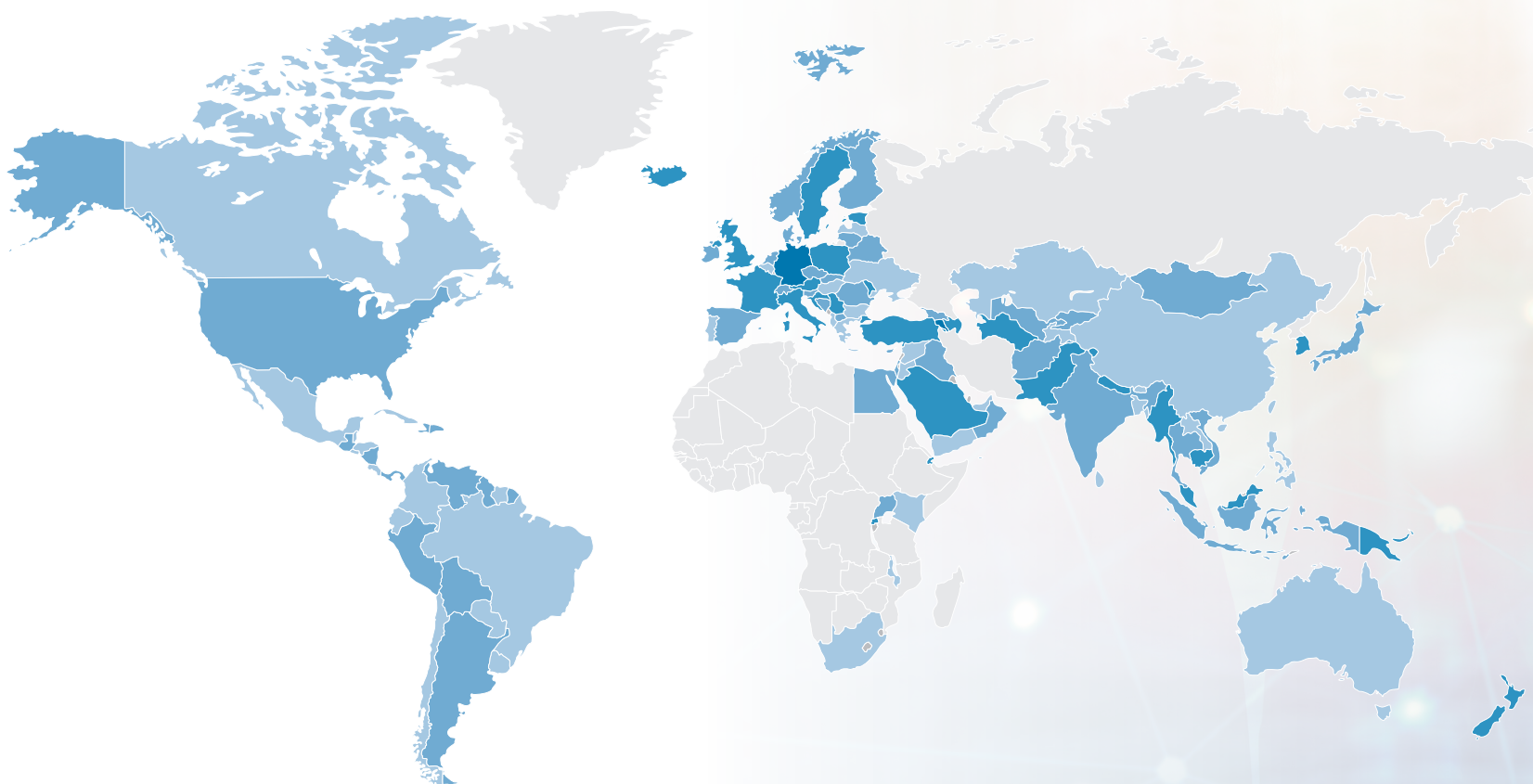
 **MSR IMAGEFILM**  
Smart Parking



# Worldwide Distribution

Global Expert in Gas Detection.

MSR-Electronic now sells its products and solutions worldwide through eight of its own branches and over 80 certified partners.



## MSR Branches



Branch office for Croatia,  
Slovenia, Bosnia and  
Herzegovina

Phone: +385 98 261 005  
Mail: [info@msr-arba.com](mailto:info@msr-arba.com)  
[www.msr-arba.com](http://www.msr-arba.com)



Branch office for Bangladesh,  
Brunei, China, Hong Kong,  
Indonesia, Japan, Malaysia,  
Mongolia, Pakistan, Philippines,  
Singapore, Thailand, Taiwan,  
Vietnam, and South Korea

Phone: +65 9830 5213  
E-Mail: [info@msr-asia.com](mailto:info@msr-asia.com)  
[www.msr-asia.com](http://www.msr-asia.com)



Branch office for Austria,  
Hungary, Slovakia,  
Czech Republic

Phone: +43 2262 64819  
Mail: [info@msr-austria.at](mailto:info@msr-austria.at)  
[www.msr-austria.at](http://www.msr-austria.at)



Branch office for Spain, Portugal,  
Gibraltar, Andorra and  
Latin America

Phone: +34 (0)613 03 52 62  
E-Mail: [info@msr-iberia.com](mailto:info@msr-iberia.com)  
[www.msr-iberia.com](http://www.msr-iberia.com)



Branch office for Italy, Italian/  
French Switzerland, South of  
France, Monaco and Malta

Phone: +39 0331 1011 700  
Mail: [info@msr-italy.it](mailto:info@msr-italy.it)  
[www.msr-italy.it](http://www.msr-italy.it)



Branch office for Sweden, Norway,  
Estonia, Finland, Denmark, Iceland,  
Estonia, Latvia, Lithuania

Phone: +46 (0)70-278 02 05  
E-Mail: [info@msr-nordic.com](mailto:info@msr-nordic.com)  
[www.msr-nordic.com](http://www.msr-nordic.com)



Branch office for Scotland,  
England, Wales, Northern  
Ireland, Ireland and worldwide

Phone: +44 7904 103879  
E-Mail: [info@msr-electronic.com](mailto:info@msr-electronic.com)  
[www.msr-electronic.com](http://www.msr-electronic.com)



Branch office for the United  
States of America

Phone: +1 469-416-6765  
Email: [info@msr-usa.com](mailto:info@msr-usa.com)  
[www.msr-usa.com](http://www.msr-usa.com)



COMING  
SOON



COMING  
SOON



**MSR Partner**

Here you will find the right partner in your region.



# Certificates



Safety for all applications.

The products of MSR-Electronic meet more than the general standards and regulations and thus guarantee the safety of the system.

## ISO certifications for the company

Quality management system: DIN EN ISO 9001:2015

Environmental protection management system: DIN EN ISO 14001:2015

Energy management system: DIN EN ISO 50001:2018

## Certified for the PolyGard® product series

ANSI/UL 61010-1, CAN/CSA-22.2 No. 61010-1

Products: DGC, SB, MSC, WSB, SC, MC

UL2075

Products: MSC, WSB, SB, RB, SC-CO, MC-CO (only for carbon monoxide)

UL2017

Products: DGC

Other conformities:

EU Richtlinie 2014/30/EU und 2014/35/EU, EN 50545-1, EN 50271, EN 61010-1, EN 50270, EN 378, EN 50104, EN 62990-1, EN 14624, EN 61508-1 -2 -3, SIL EN 50402

## Certified for the PolyXeta® product series

Electrical explosion protection of sensors and devices according to ATEX/IECEX, EN IEC 60079-0, -1 and EU Directive 2014/34/EU (DEKRA Testing and Certification GmbH)

Products: PX, SX, SSAX

Metrological testing of sensors and devices according to EN 60079-29-1 for combustible gases and EN 50104 for oxygen (DEKRA Testing and Certification GmbH)

Products: PX, SX

Functional testing (SIL2) of sensors and devices according to EN IEC 61508-1 -2 -3, EN 50271, EN 50402 (DEKRA Testing and Certification GmbH)

Products: PX, SX

Approval for shipping in accordance with European Directive 2014/90/EU, (EU) 2025/1533/EU

Products: PX, SX, SSAX

PESO certification (Petroleum & Explosives Safety Organization) for India in accordance with Petroleum Rules, 2002

Products: PX, SX

Other conformities:

EU Directives 2014/30/EU und 2014/35/EU, EN 50270, EN 378, EN 50402, EN 62990-1, EN 14624  
Products: PX, SX, SSAX





# Certificates

## Standards for your safety.



**Underwriters Laboratories (UL)** is an independent organization in the USA that tests and certifies products with regard to their safety, with a focus on fire and personal protection. UL approval of MSR-Electronic products indicates demonstrated compliance with the safety regulations of the USA and Canada.



**CSA** is a leading global provider in the field of standards development and an internationally recognized and accredited provider of testing, inspection, and certification services for the North American and global markets. MSR-Electronic products are tested in CSA's EMC laboratories.



**DNV** is an international classification society and service provider in the fields of technical consultancy, engineering services, certifications and risk management. As a classification society, DNV prepares standards for ships and offshore units, known as class rules. These rules contain regulations on safety, reliability and environmental protection that ships and mobile offshore units must comply with in international waters. The certification allows MSR-Electronic products to be used in certain maritime areas worldwide.



**DEKRA Testing and Certification GmbH** certifies MSR-Electronic products for the following approvals: Type examination (ATEX and measurement technology, IECEx, SIL)



**The ATEX Product Directive** for equipment and protective systems intended for use in potentially explosive atmospheres sets out the rules for placing products on the market that are used in potentially explosive atmospheres. MSR-Electronic certifies with this certification that the products meet the essential health and safety requirements for design and construction as well as the requirements regarding the measuring function in hazardous areas.

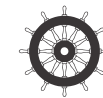
**ATEX** applies in Europe and IECEx worldwide (except Europe or the USA).



**International Electrotechnical Commission (IEC)** is an international standards organization for standards in the field of electrical engineering and electronics.



**IECEX = IECEx** stands for „International Electrotechnical Commission System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres“ or „International procedure for the certification of electrical equipment used in hazardous areas“. Similar to ATEX, IECEx has regulations that classify environments into specific hazard classes. Several standards issued by the IEC are decisive in this regard.



**The MED marking** confirms that a product or piece of equipment is approved for use on ships of EU member states and countries that apply the Marine Equipment Directive 2014/90/EU. This process is called M.E.D/MED certification or approval, sometimes also referred to as the ‚Steering Wheel‘ or ‚Wheelmark‘ marking, and confirms that the equipment or product is suitable for use in shipbuilding.



**CE** confirms compliance with the most important health and safety directives of the European Union. By affixing the CE mark, MSR-Electronic confirms that all necessary regulations are complied with and that all relevant measurements are performed and documented.



**PESO certification** stands for Petroleum and Explosives Safety Organisation of India registration and describes the mandatory licensing program for the oil and gas industry in India. PESO certification was previously known as Chief Controller of Explosives (CCOE) testing and is based on the Explosives Act of 1884 and the Petroleum Act of 1934, as well as all related legislative decrees thereafter, in particular the Explosives Rules of 2008 and the Petroleum Rules of 2002.



# Highlights, Outlook and Products





# Highlights 2025

## New webshop gasdetection.shop

New, completely modernized webshop with clear product series—here you will find our product range in a completely revised, clearly structured format. This allows you to find the right solution for your project more quickly and intuitively..

page 55



## Upgrade WSB

The new WSB impresses with robust communication, smart signal processing, improved EMC performance and easy installation—officially CE certified for maximum safety.

page 22

## New DGC controller

Web data can now be retrieved from the GC, and all sensor head and GC data are available in Modbus. It offers SIL2-compliant communication, horn acknowledgment and self-holding via Modbus, UPS monitoring, remote calibration, and an integrated zone function.

page 25



## Splash guard

More protection for your sensors: The PolyGuard SplashGuard protects gas warning systems outdoors and during cleaning work from moisture and damage.

page 42



## Larger PX housings

PX now also available as an XL aluminum and stainless steel housing – with more space for easier installation.

page 35



## Access control

Secure access with MSR Access Management: Open standard codes or customized password solutions prevent unauthorized access to your gas detection devices.

page 32



# Outlook 2026



## Update semiconductor sensors

New generation of semiconductor sensors: improved performance, more robust EMC stability, and precisely adjustable thanks to digital potentiometer.

## RC sensor

Developed specifically for the selective detection of CO<sub>2</sub>, combustible gases, and A2L refrigerants, the RC Sensor offers high accuracy, linearity, and repeatability. Integrated ambient compensation enables precise measurements under various conditions, while self-testing error management ensures continuous reliability.



## PX facelift

With optimized terminal for easier wiring and modern, enlarged LCD display.



## IR marine sensors

Our new infrared sensors will be released in 2026 – certified according to ATEX, SIL2, and marine standards.



## Update PCE

New PCE tool with a modern, intuitive interface and innovative features – for more convenient parameterization and configuration.



# Product series

## S series



Addressable digital gas detection system (Sensor-Board SB) for combustible, toxic and refrigerant gases.



- **Communication**  
RS-485 interface for stable and secure system networking
- **Precise detection**  
High accuracy thanks to digital signal processing
- **Easy maintenance with X-Change**  
Plug & Play systems for fast, convenient service
- **Robust design**  
Reliable with IP65 even under extreme conditions

## M series



Gas measuring, monitoring and warning controller (Multi-Sensor-Controller MSC) for reliable detection of combustible, toxic and refrigerant gases.



- **Flexible control**  
3 relays (SPDT, potential-free, 250 V)
- **Intelligent communication**  
RS-485 interface with DGC and Modbus protocol
- **Precise signal transmission**  
4–20 mA input and output for seamless system integration, up to 3 sensors including remote

## W series



Warning- and Sensor-Board WSB for digital and analog sensor technology for the precise detection of combustible, toxic and refrigerant gases.



- **Versatile alarm functions**  
Alarm and fault relays (30 V)
- **Intelligent interfaces**  
RS-485 interface with DGC or Modbus protocol
- **Precise signal transmission**  
4–20 mA input and output for reliable communication
- **Flexible**  
Connection of up to 3 sensors (2 digital)

## A series



Analog gas detector MC for connection to DGC, MSC, WSB or any compatible gas detector.



- **Reliable self-monitoring**  
Integrated watchdog for maximum safety
- **Precise signal transmission**  
4–20 mA (2–10 V) output for easy system integration
- **Optional visualisation**  
Display with transistor output for flexible alarm solutions

## X series



Stationary gas detection device PX for continuous monitoring of ambient air for use in potentially explosive atmospheres in zones 1 and 2.



- **Certified safety**  
ATEX, IECEx and SIL2 certified for worldwide use in hazardous areas
- **Flexible communication**  
4–20 mA, RS-485 interface, DGC and Modbus for versatile integration
- **Extended operating range**  
Operation from -40 °C to +60 °C with alarm and fault signal relay

## Accessories



Warning signs, tools and warning horns for all products.



- **Practical operating package**  
Service-Tool or PCE with software for easy configuration
- **Clear alarm message**  
Acoustic and visual signals for quick response
- **Standard-compliant safety**  
Warning signs in accordance with EN 50545-1 for standard-compliant installation

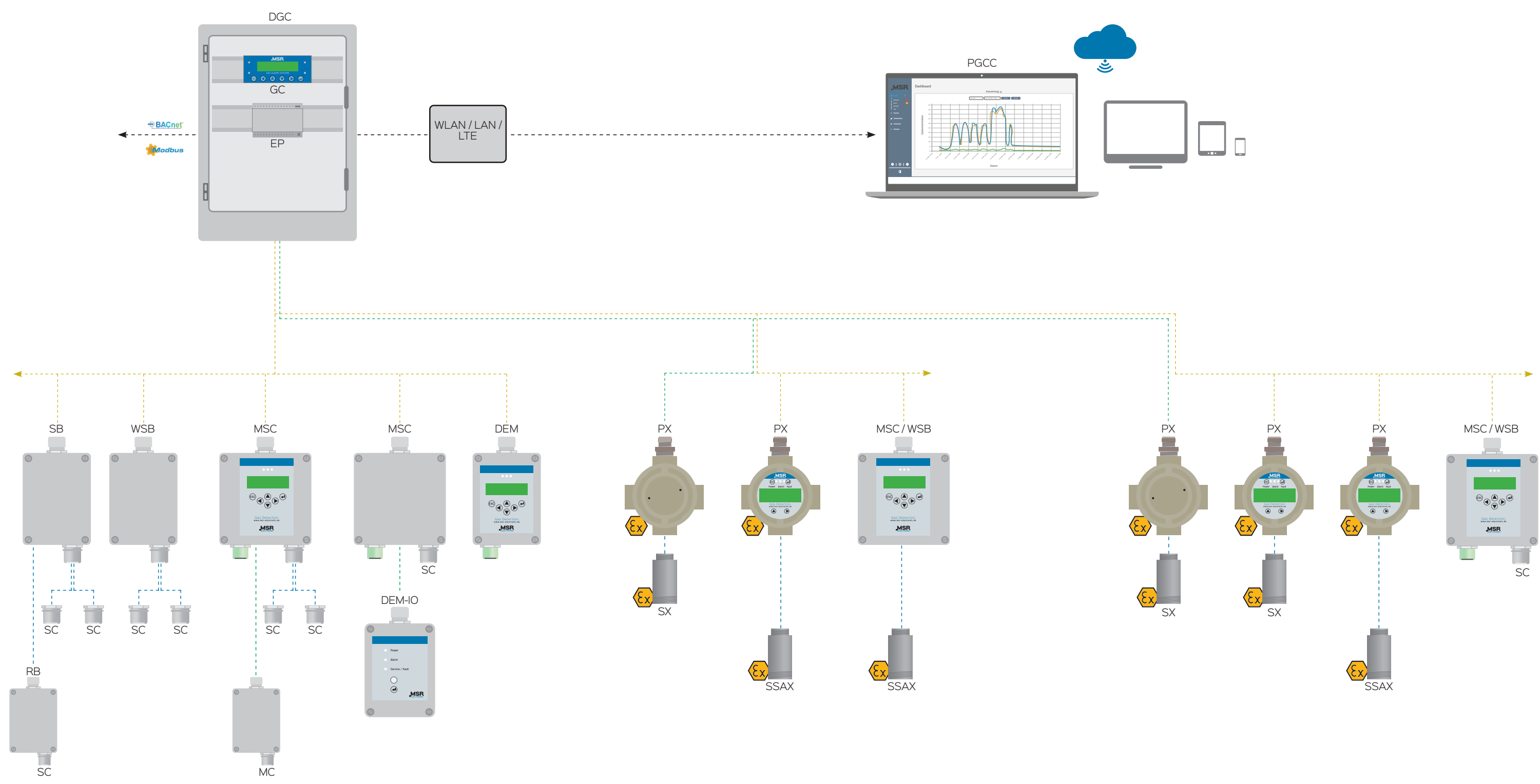


# Product system

## PolyGard®

## PolyXeta®

## PolyMarine®



# Products in detail



## Digital-Gas-Controller DGC

Measurement, warning and control system in different versions.  
Applicable for large systems for monitoring and evaluation of up to 128 sensors and control of up to 32 relays.

[Page 25](#)



## PolyGard® Cloud Control PGCC

For visualization of measurement data, parameters and statistics.  
In combination with GC and PG/PX controllers. The integrated network interface enables remote access.

[Page 30](#)



## Analog Sensor MC

Analog change sensor with 4-20 mA / 2-10 V Output and simple, integrated, digital calibration routine via tool.

[Page 16](#)



## Digital Sensor SC

Digital change sensor with local bus, provides information on calibration interval and service life in addition to the measured value.  
Digital signature of the sensor for a unique assignment with the connected board.

[Page 16](#)



## Sensor-Board SB

For providing the measured values of up to 3 SC sensors to the GC controller or higher-level BMS.

[Page 21](#)



## Door-Entrance-Modul DEM and DEM-IO

The module in various versions opens up new possibilities for secure monitoring of access points.

[Page 28](#)



## Multi-Sensor-Controller MSC

Compact gas warning device for the connection of up to 3 sensors.  
The device has 3 power relays, Modbus (BMS), analog output as standard.  
Optionally with display and UPS.

[Page 24](#)



## Warning and Sensor-Board WSB

Compact gas detector for connecting up to 3 sensors, 2 of them with the same gases. Optionally, the device can have a display, 2 relays, Modbus and analog output.

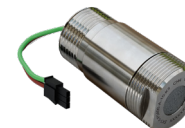
[Page 22](#)



## PolyXeta® PX

Gas detector with certification for ATEX, IECEx zone 1/2, SIL2, MED and DNV.  
The signal is transmitted via relay, Modbus or analog output.

[Page 35](#)



## Digital Sensor SX

Digital exchange sensor with local bus for use in PX. In addition to the measured value, it provides information about the calibration interval and service life.  
Certified for ATEX and IECEx zone 1/2 and SIL2.

[Page 37](#)



## Digital Sensor SSAX

Remote sensor head for connection to the WSB and the PX. For use in ATEX and IECEx zone 1/2 and SIL2. In addition to the measured value, the sensor provides information on the calibration interval and service life.

[Page 36](#)



## Accessories PolyGard® und PolyXeta®

Various accessories for calibration and parameterization of the MSR-Electronic products as well as warning devices for visual and acoustic indication of alarms.

[Page 41](#)



# PolyGard®

## Gas detection systems for buildings

Gas warning systems or gas alarm systems must be reliable at all times. In the event of gas leaks, e.g. carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO) or nitrogen oxides (NO<sub>x</sub>), rapid alarms and reliable products are required.

The sensors, controllers and warning devices from MSR-Electronic effectively protect people and systems in dangerous situations where combustible, suffocating or toxic gases are emitted. Modern communication technology makes it possible to react quickly.

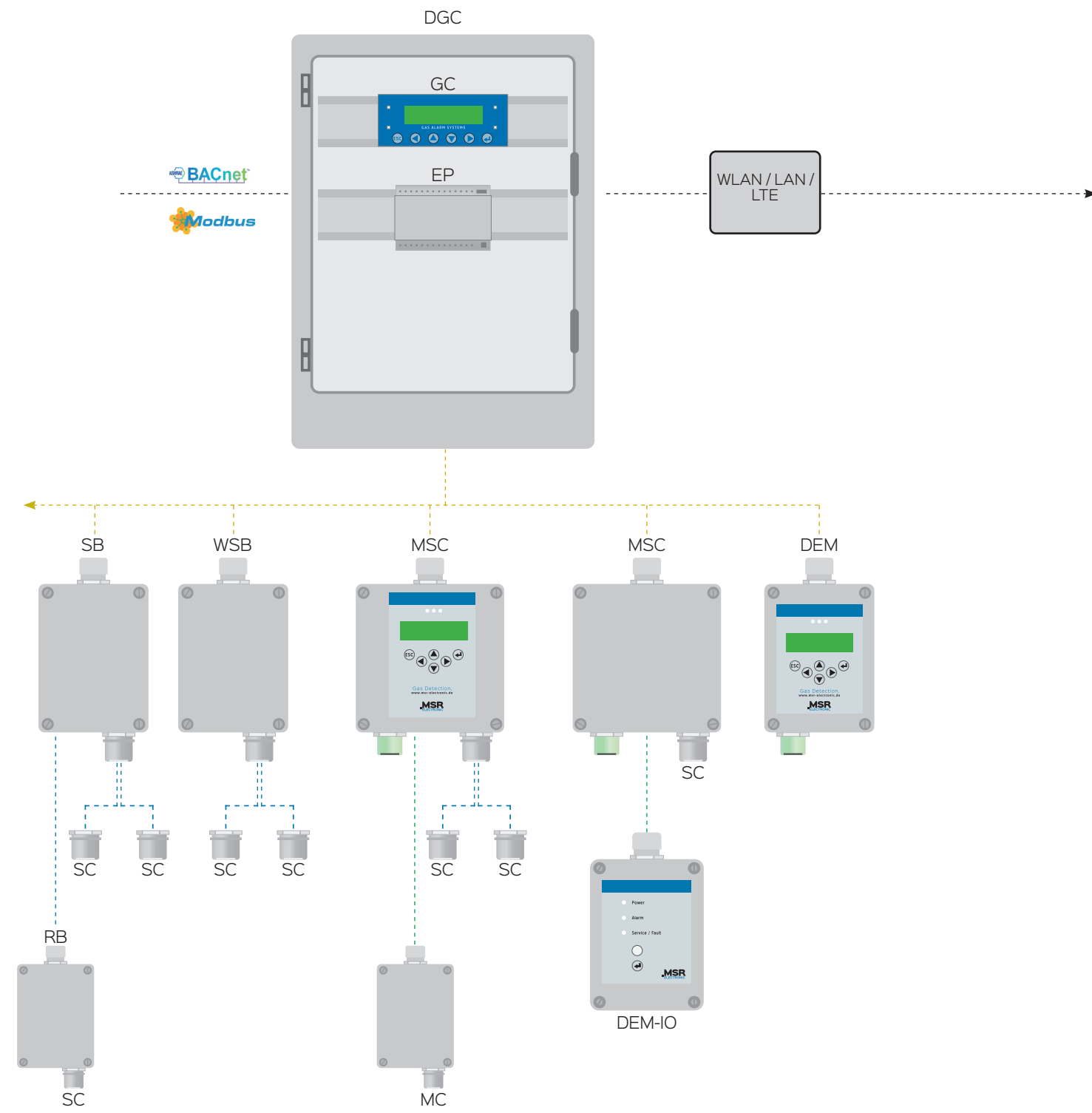
### Benefits

- **More safety**  
More than required by all national standards
- **Exchangeable sensor with X-Change technology**  
Significantly lower maintenance costs
- **Precise planning capability**  
with overall reduced costs
- **Integration in BMS/GLT (BACnet, Modbus)**





# PolyGard®



## CONTROLLER AND MODULES

MSC	Multi-Sensor-Controller
DGC	Digital-Gas-Controller
GC	Gas-Controller-Modul
EP	Gas-Controller Extension Module
DEM-IO	Door-Entrance-Modul
DEM	Door-Entrance-Modul
PGCC	PolyGard® Cloud Control

## GAS SENSORS AND BOARDS

MC	Analog Sensor
SC	Digital Sensor
SB	Sensor-Board
WSB	Warning and Sensor-Board

-----	SIL / RS-485 / DGC-Bus	-----	RS-485 / Modbus / BACnet
- - - - -	Digital / L-Bus	- - - - -	Analog, 4-20 mA

# Sensor Heads SC and MC

## Easy calibration with X-Change technology.

MSR-Electronic develops individual gas sensors, e.g. for CO<sub>2</sub>, CO, CH<sub>4</sub>, CH<sub>2</sub>O, NH<sub>3</sub>, O<sub>2</sub> or H<sub>2</sub> and systems that monitor toxic or combustible gas concentrations.

The innovative sensors are integrated into complex warning systems and are used, for example, in parking garages, biogas plants, refrigeration plants, petrochemical industrial plants, breweries and dispensing systems or in laboratories and medical applications as well as in hydrogen production and processing.

In addition to the sensor element and the measuring amplifier, the SC and MC sensors include a  $\mu$ Controller for measured value processing.

Thus, various data can be processed and utilized, such as the temperature for compensation of the measured value. In addition, calibration interval and errors are monitored and transmitted to the evaluation unit.

Thanks to the X-Change technology, calibration can be performed by simply changing the sensor head or by using the integrated, convenient calibration routine directly at the system.

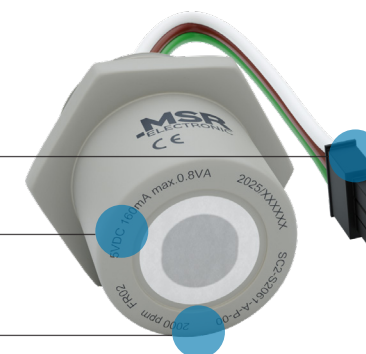
The sensors are designed for connection to MSR-Electronic controllers and boards.

### Digital sensor

Connection L-Bus  
max. 15 m away

Laser engraving Type designation

Sensor head housing IP65



### Analog sensor

Digital calibration

Power supply and  
analog output

Sensor head MC  
with 4-20 mA / 2-10 V output





# Sensor Heads SC and MC

## Infrared sensor element

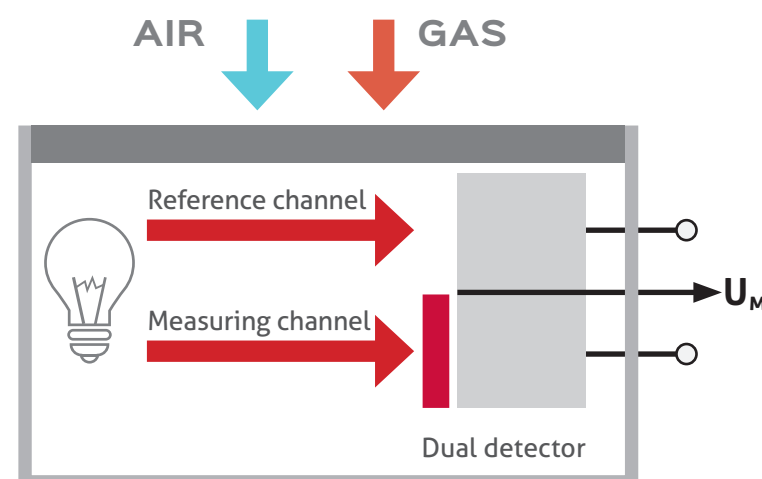
For selective gas measurement.

For applications where durability and high precision measurement are important. The IR measuring method with integrated temperature compensation ensures highest accuracy, selectivity and reliability. In the  $\mu$ Controller all data and measured values of the sensor element

are stored fail-safe and are digitally transmitted via the local bus to the Sensor-Board SB or Multi-Sensor-Board MSB or to the MSC or WSB. The sensor head automatically transmits information about the maintenance interval to the controller.

### Benefits

- Long life expectancy
- Low maintenance costs
- High accuracy, selectivity and reliability
- Measuring value setting time  $t_{90} < 30$  sec.
- Gilded mirror surface
- Low zero drift
- Sensor with long service life and high durability
- Running-in time until operation  $< 60$  sec.



# Sensor Heads SC and MC

## Electrochem. sensor element

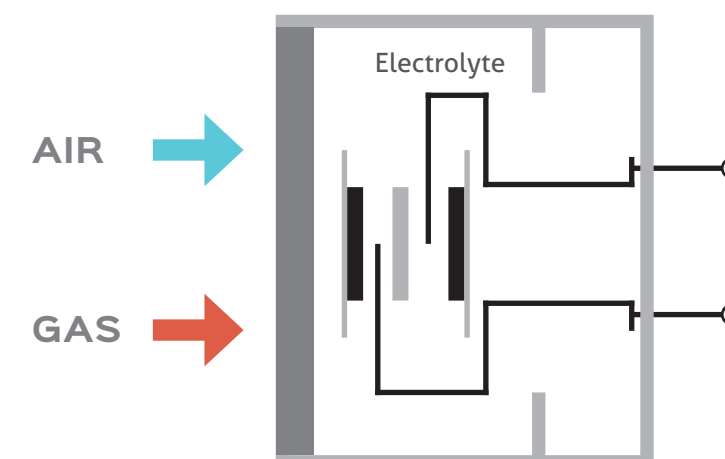
For toxic gases and coolants.

These sensors are used to measure mainly toxic gases such as CO, NO, NO<sub>2</sub> and function according to the electrochemical principle. This means that there is an electrolyte in a cell. It reacts proportionally to the presence of gas with the

formation of ions, which ultimately generates a current. This change then indicates the gas concentration. This principle has a high sensitivity and a fast reaction time, which is especially interesting for toxic gases.

### Benefits

- High sensitivity
- Linear measurement signal
- Low cross-sensitivity
- No energy is required
- Fast response time
- No poisoning by silicones



# Sensor Heads SC and MC

## Pellistor sensor element

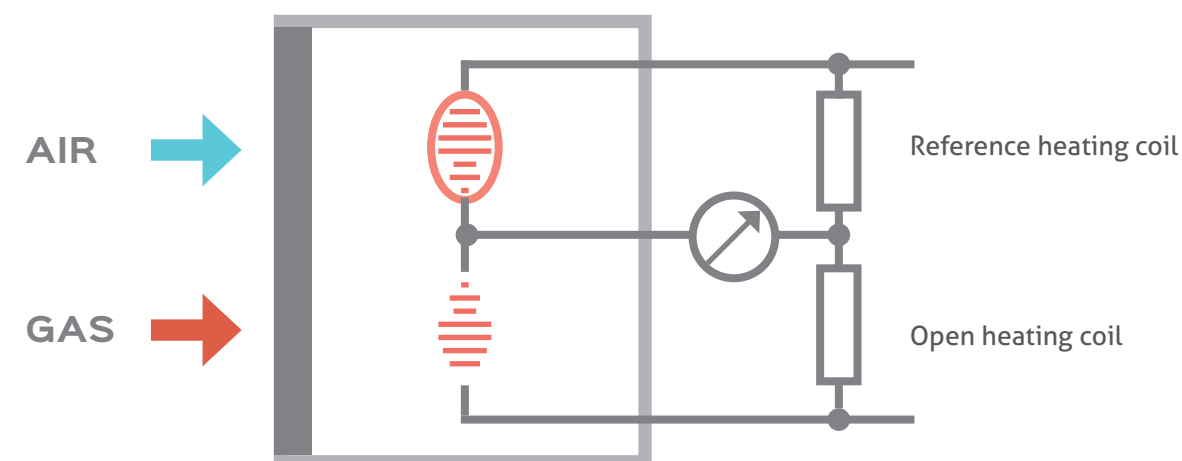
For combustible gases and vapors.

Pellistors or catalytic sensors consist of an active and a passive pellistor. These form a Wheatstone bridge circuit, which is operated with a heating current of approx. 450 °C. When gas is present,

the resistance on the active side changes, which generates a current flow. This method is particularly suitable for explosive gases, where high linearity and measuring accuracy is required.

### Benefits

- Linear signal
- High measuring accuracy
- Temperature range -30 °C to +50 °C



# Sensor Heads SC and MC

## Semiconductor sensor element

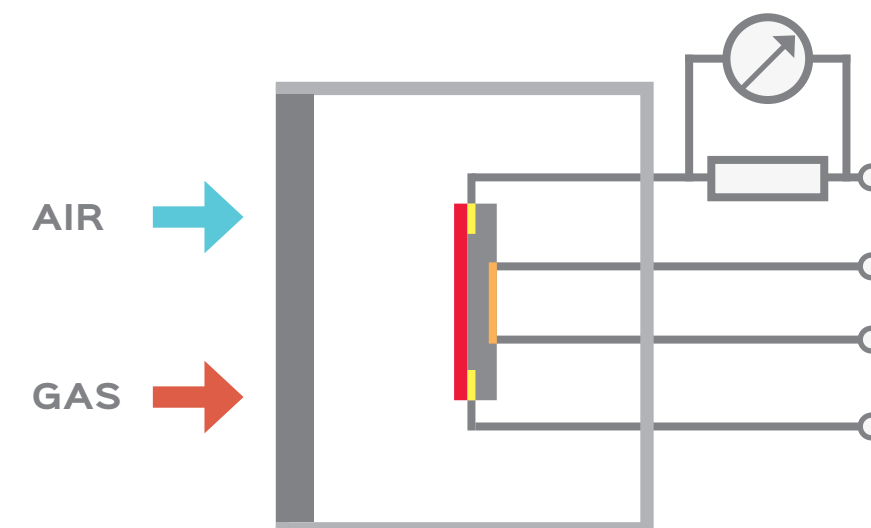
For combustible gases and refrigerant gases.

Semiconductor gas sensors for gas detection are not made of silicon or germanium, but of N- or P-conducting metal oxides (e.g. zinc oxide, tin oxide, copper oxide). The measuring effect is based on the accumulation of certain gas atoms on the

surface of the semiconductor material, which causes a change in electrical resistance. These sensors are not very selective, but are excellent for leakage measurement.

### Benefits

- Cost-effective
- Very good leakage measurement





# Sensor Heads SC and MC

## MPS™ sensor element

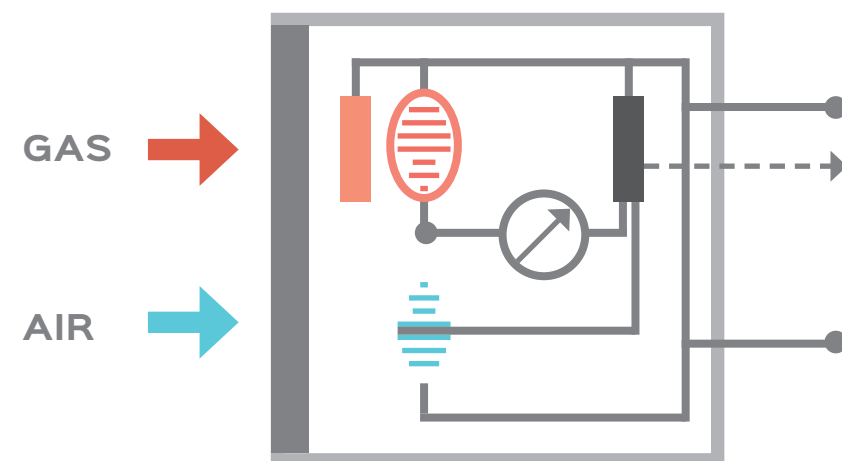
For combustible gases and vapors.

The core component of the MPS™ sensors (Molecular Property Spectrometer) is the microelectromechanical system (MEMS). This consists of a heating plate with a Joule heater and a resistance thermometer. If a flammable gas or flame-retardant A2L refrigerant diffuses into the sensor, the thermodynamic properties of the gas mixture at the MEMS sensor change. This has an influence on the temperature of the heating

plate. The Joule heater regulates this temperature. The temperature of the heating plate and the required heating power are measured. In addition, the ambient conditions are permanently monitored by an environmental sensor. The collected data is processed by an algorithm in the sensor's software and the gas type and concentration are determined.

### Benefits

- Minimum 15-year service life
- Low power consumption
- High accuracy, linearity, repeatability, and stability
- Integrated environmental compensation (pressure, humidity, and temperature)
- Integrated self-tests and error management
- Extremely resistant to poisoning



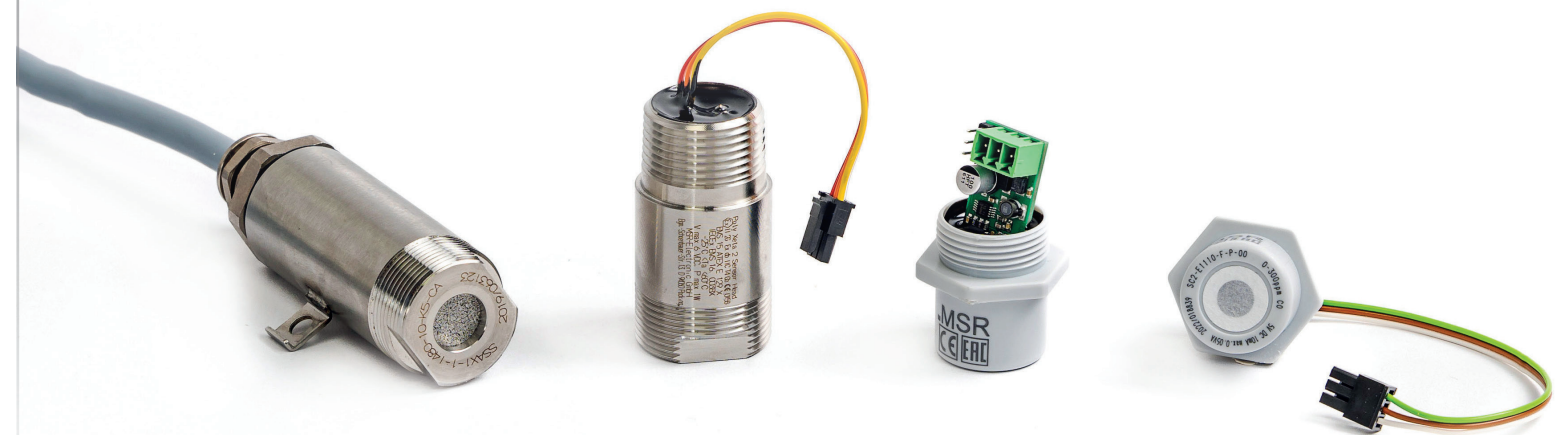
The gas sensors developed in cooperation with NevadaNano represent the latest innovative sensor technology for detecting flammable gases and refrigerants. The highly flexible sensor solution is attractive for a wide range of appli-

cations. MPS™ sensors are particularly suitable for areas that are difficult to access, as they can operate for long periods without calibration or maintenance.

### MSR-Electronic ON TOP

No classification into groups: MPS™ sensors from MSR-Electronic are individually adapted to the respective target gas, thus achieving significantly higher precision.

In addition, they have a significantly longer service life than comparable gas sensors on the market.



# X-Change Technology

## Recalibration with exchangeable sensor SC and MC.

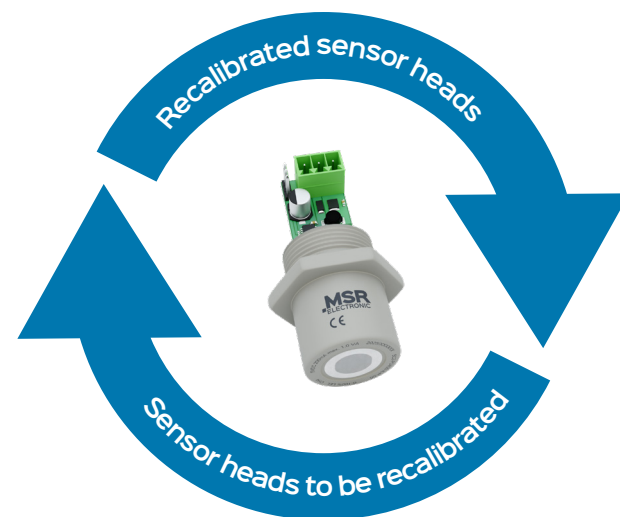
Until now, the necessary calibration of the sensors was a complex procedure and dependent on an external certified company. This involved a great deal of time and expense. The sensors had to be opened, checked, and calibrated with great care on the construction site. If a fault was found, it was necessary to take the entire sen-

sor away and replace it later. The new X-Change technology eliminates this effort. The exchangeable head can be replaced on site at any time. The transmitter remains untouched. This saves time and costs.

## Time-saving and independent recalibration

- Significant time and cost savings
- Simple exchange process
- Delivery of recalibrated sensor heads
- Increased safety for your system

**MSR**  
ELECTRONIC  
and Partner

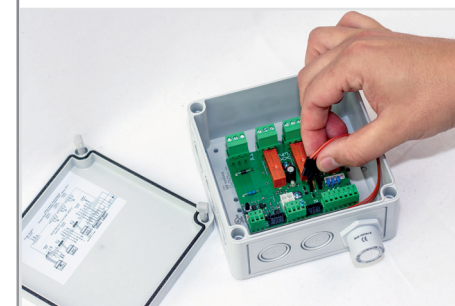


Customer

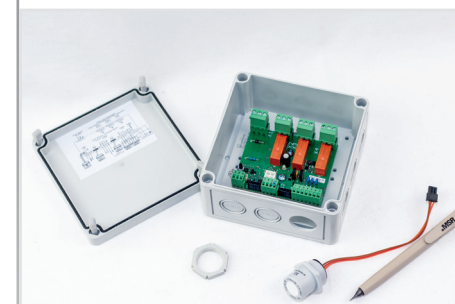
 [How-to video: X-Change Technologie](#)



- 1 Open the housing with a customary screw driver.



- 2 Disconnect the sensor cable and unscrew the sensor head to be calibrated.  
**The yellow LED lights up.**



- 3 Replace the sensor head and connect the cable of the newly calibrated head to the circuit board.  
**The yellow LED goes off again.**



- 4 Close the housing again and the recalibrated sensor head is immediately ready for use.



# Sensor-Board SB

For connecting up to three different sensor heads.

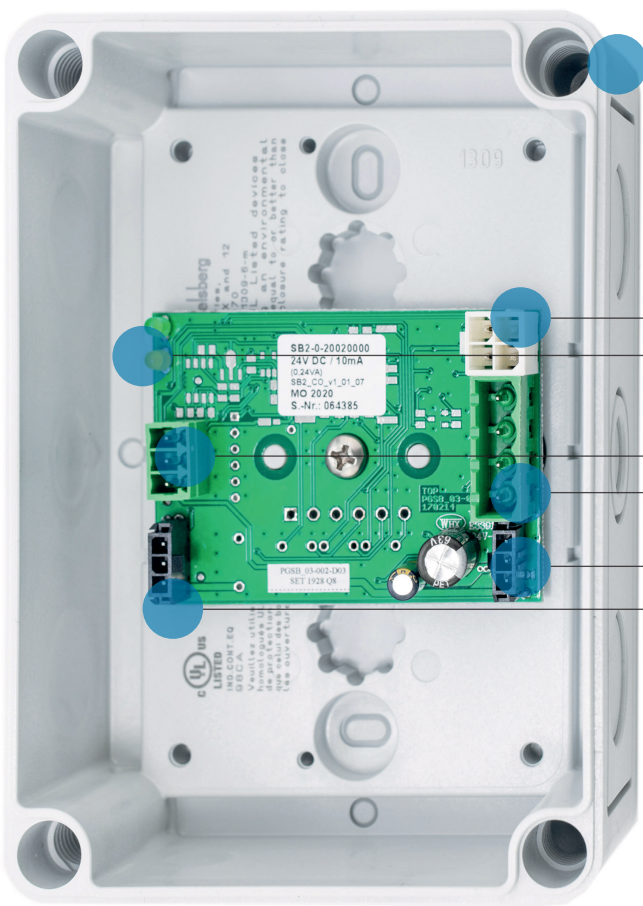
Up to 3 different sensor heads of the SC series can be connected to the SB sensor-board via the local bus. The SB ensures the power supply of the SC and provides the measured data of the sensor heads for digital communication. Communication with the digital-gas-controller DGC takes place via RS-485 fieldbus interface with DGC protocol. Additional protocols are available for direct connection to higher-level BMS.

## Benefits

- Device can be used independently of control panel, stand-alone device without DGC
- System can be expanded at any time, can grow modularly
- Digital measured value processing
- Internal function monitoring with integrated watchdog
- Measured values in sensor head SC, making it easy to change: uncalibrated <> calibrated
- Up to 3 different sensor heads
- Sensor head can be removed via Remote-Board (RB)
- Software according to SIL2-compliant development process
- WAO: Status LED with warning buzzer
- Acknowledgement button (optional)
- Serial RS-485 interface with protocol for DGC or Modbus protocol
- X-Change technology for safe and easy sensor replacement without prior knowledge



Simple board for setting up a bus system.



- Housing IP65
- Interface service tool STL06
- Control LED (green / yellow)
- Connection for RB for additional sensor SC
- DGC Fieldbus
- Power supply
- Input sensor head 1
- Input sensor head 2

# Warning and Sensor-Board WSB

UPGRADE

With RS-485 interface, 4-20 mA output and alarm relay

The WSB warning and sensor-board ensures the power supply to the sensors and prepares the measured data from the sensor head for digital communication. Communication with the DGC controller takes place via the RS-485 fieldbus interface with DGC protocol.

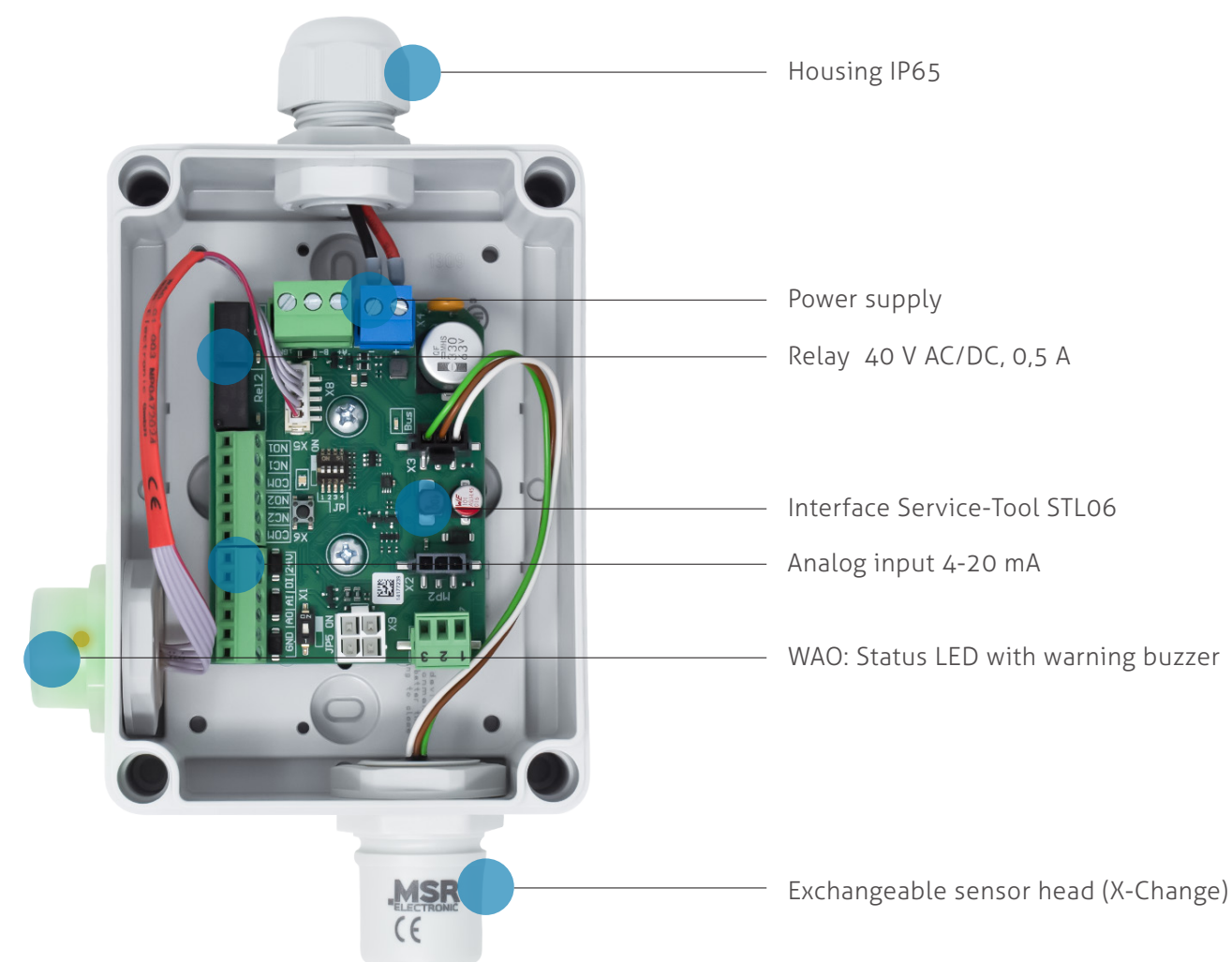
The sensor head is connected to the local bus via a plug connection. This enables a simple sensor head exchange instead of on-site calibration. The internal X-Change routine recognizes the replaced sensor head during the change process and automatically starts the measurement operation.

## BENEFITS

- Modular design
- Compatible with a wide range of BMS
- Easy to use, no separate tool required
- Device can be used independently of control center, stand-alone devices without DGC
- System can be expanded at any time, can grow modularly
- Individual parameterization possible
- Resistant to dust, moisture and high/low temperatures
- Ideal for heating or cooling applications
- X-Change technology for safe and easy sensor replacement without prior knowledge



Simple sensor replacement via plug connection on the local bus.





# Multi-Sensor-Controller MSC

## Different sensors for different gases.

The Multi-Sensor-Controller MSC monitors the measured values and activates the alarm relays if the specified alarm thresholds for the preliminary and main alarms are exceeded. Various output and input options enable easy integration into existing systems. The sensors are con-

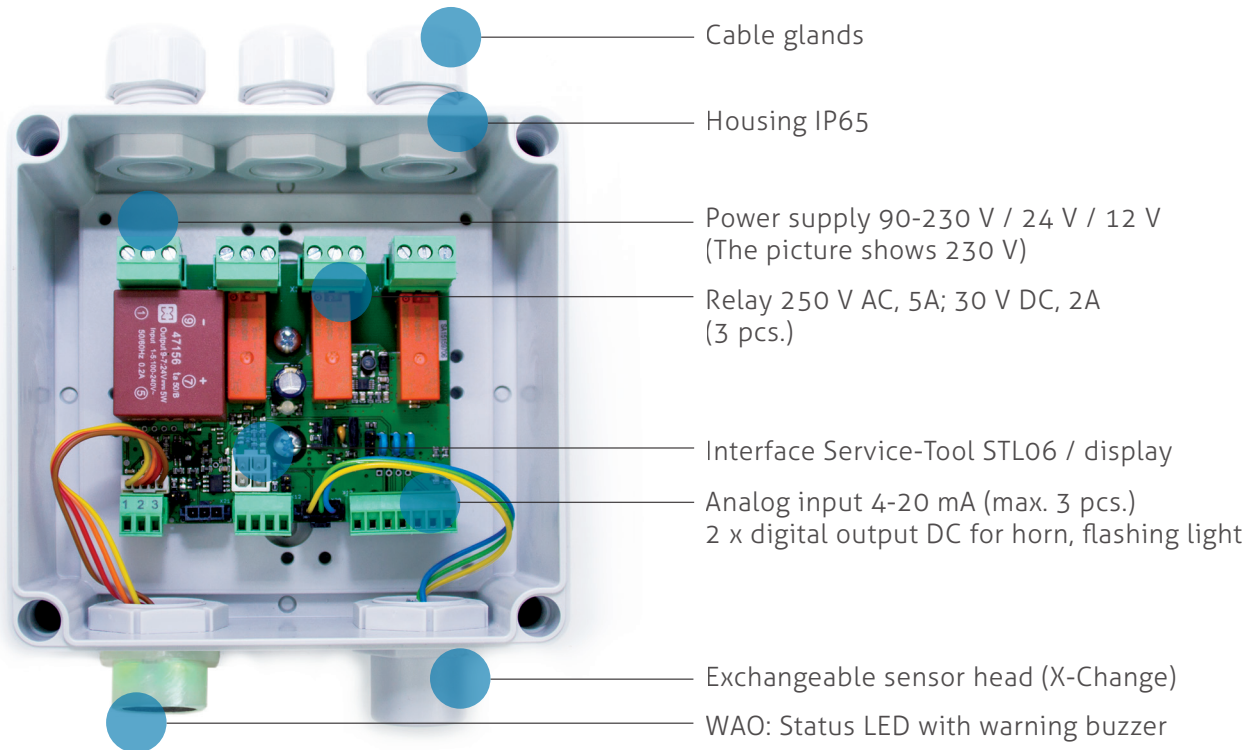
nected to the MSC directly on the board. Up to 2 (different) digital sensors can be connected here, or 3 analog sensors can be connected separately. In total, the MSC can process up to 3 sensors, making it a small, compact version with many possible applications.

## Benefits

- Modular design
- Compatible with a wide range of BMS
- Device can be used independently of the control center, stand-alone devices without DGC
- System can be expanded at any time, can grow modularly
- Individual parameterization possible
- Display / UPS (optional)
- X-Change technology for safe and easy sensor replacement without prior knowledge



Modern multi-sensor-controller MSC for toxic and flammable gases



# Add-on: Gas selector for MSC

## The gas selector for various gas combinations.

The gas selector allows quick and easy selection of the gases to be detected individually. No other tool is required. This makes quick configuration and adjustment easy with the gas selector. Incorrectly connected or swapped SC sensor heads are immediately recognized as errors. Two different sensor heads can be operated on the device. The gases from different Freon groups or CO<sub>2</sub> can be used in parallel on the

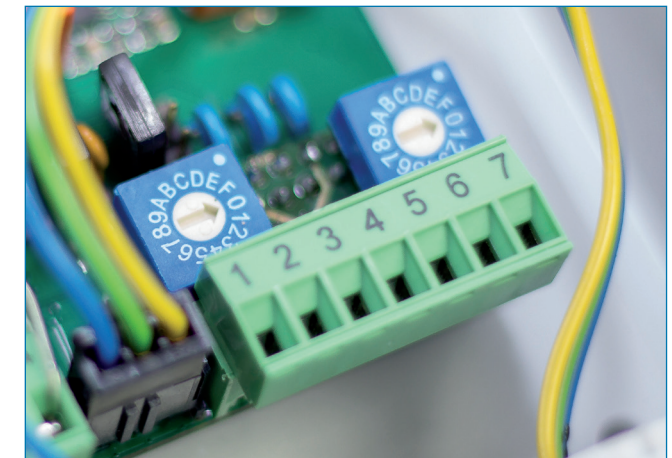
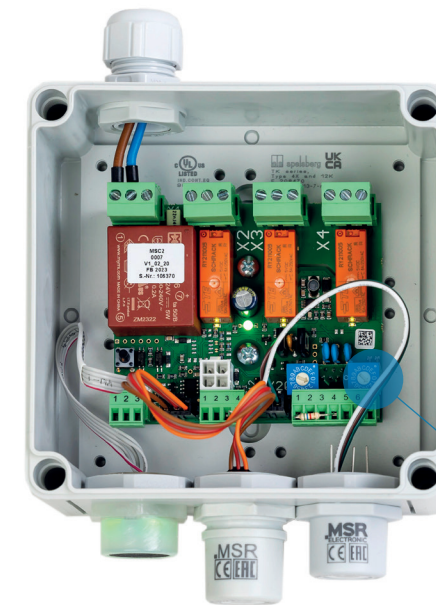
device. The advantage is fast operational readiness of the devices including adaptation to different types of gas.

The gas selector can be ordered from a certain quantity.

For further information, please contact us at [info@msr-electronic.de](mailto:info@msr-electronic.de).

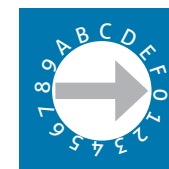
## Benefits

- Basic product: MSC
- No additional tool required
- Universally applicable
- Large number of available gas combinations
- Cost and time saving



Gasselektor

## Setting options



**Zero position:**  
No gas selected  
(factory setting)

**Gas selection, for example:**  
Sensor 1: CO<sub>2</sub> (R744)  
Sensor 2: R134a



# Digital-Gas-Controller DGC

NEW

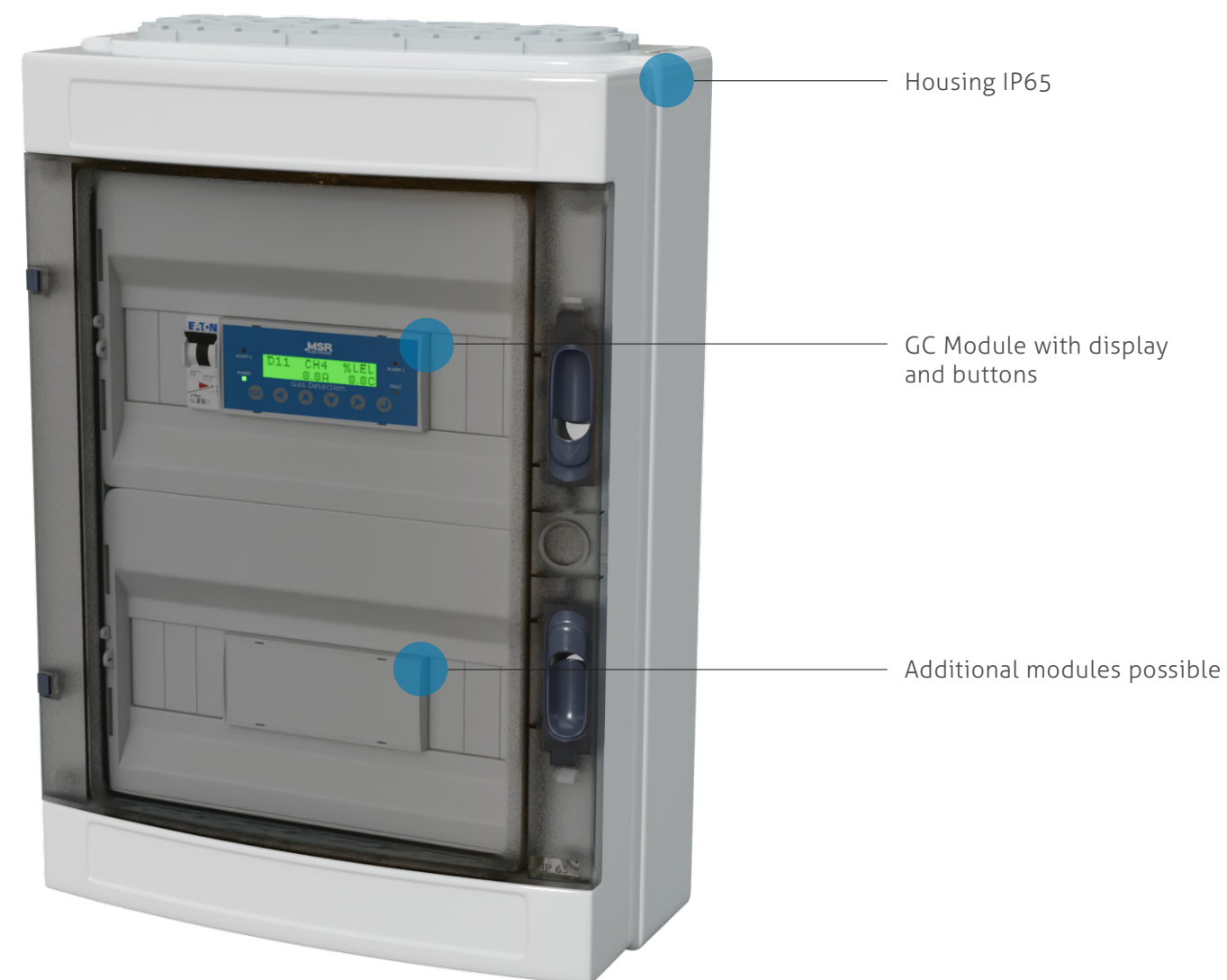
## The gas monitoring center

The Digital-Gas-Controller DGC has been developed for large systems or for extensive connections. There is hardly a scenario in gas monitoring that this controller does not cover. From complex garages to access functions that are activated by gas alarm, everything is possible. The innovative DGC gas controller series is designed in accordance with EN 50545 and other standards and can monitor and evaluate up

to 128 gas sensors, including 96 digital and/or 32 analog sensors (4-20 mA). Each sensor has 4 freely adjustable alarm thresholds. For alarm messages, the controller system has up to 128 relays with potential-free changeover contacts and up to 16 analog outputs with 4-20 mA signals.

## Benefits

- Modular design
- Compatible with a wide range of BMS
- System can be expanded at any time, can grow modularly
- Individual parameterization possible
- Large controller that can be adapted to any situation thanks to its modular design



# Digital-Gas-Controller DGC-USV

For suffocating, toxic and combustible gases and vapors as well as refrigerants.

The DGC-USV uninterruptible power supply is used to ensure the power supply of the DGC in the event of power grid disruptions, such as short-term power failures and power fluctuations in the form of overvoltage or undervoltage.

Function monitoring and deep discharge protection are integrated in conjunction with the DGC gas controller system.

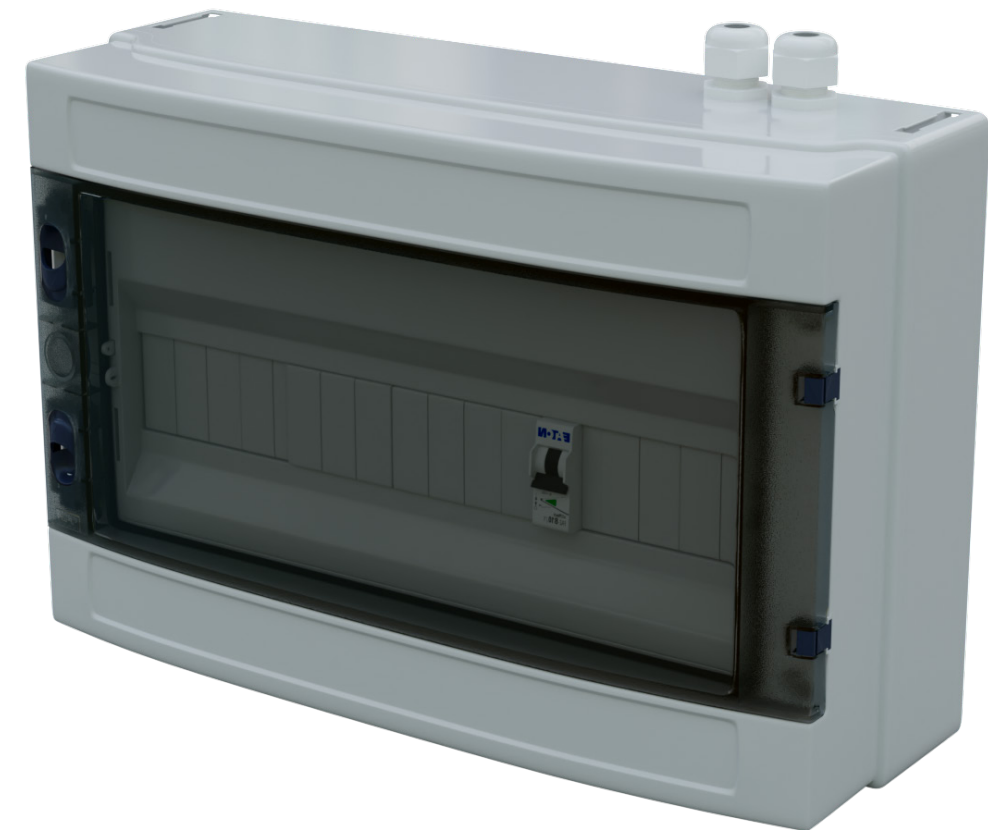
The DGC controller series in conjunction with the UPS, is used for monitoring and warning of toxic and explosive gases and vapors as well as freon refrigerants in a wide range of gas de-

tection technology. The large number of freely configurable parameters and setpoints allows individual adaptation to many applications.

The DGC Controller series, in conjunction with the UPS, is used for monitoring and warning of toxic and explosive gases and vapors, as well as Freon refrigerants in a wide range of gas detection applications. The large number of freely configurable parameters and setpoints allows for individual adaptation to various applications.

## Benefits

- Battery-supported, uninterruptible power supply in separate housing
- 3 different sizes (capacities) available





# Module for Controller DGC

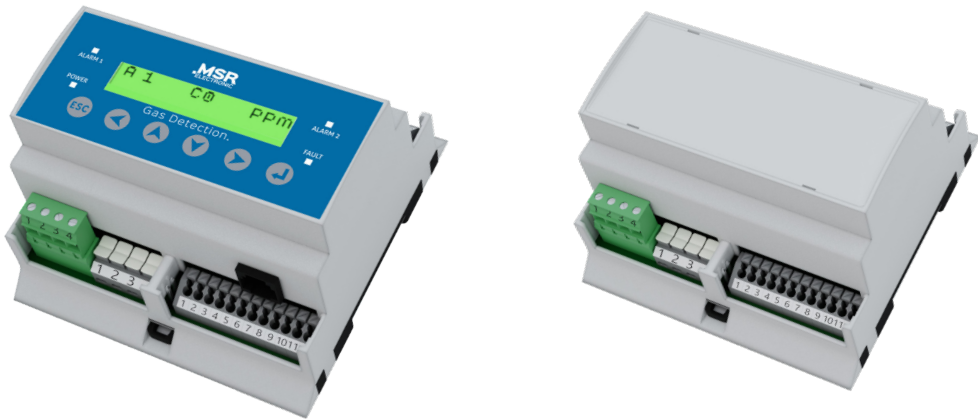
## Measuring, warning and controlling system.

The modules are designed in accordance with EN 50545-1 and can be assembled for any situation using a simple configuration. Controllers such as the GC are the core components of the systems. Expansion modules such as the EP provide additional inputs and outputs. Since MSR-Electronic has extensive certification and many

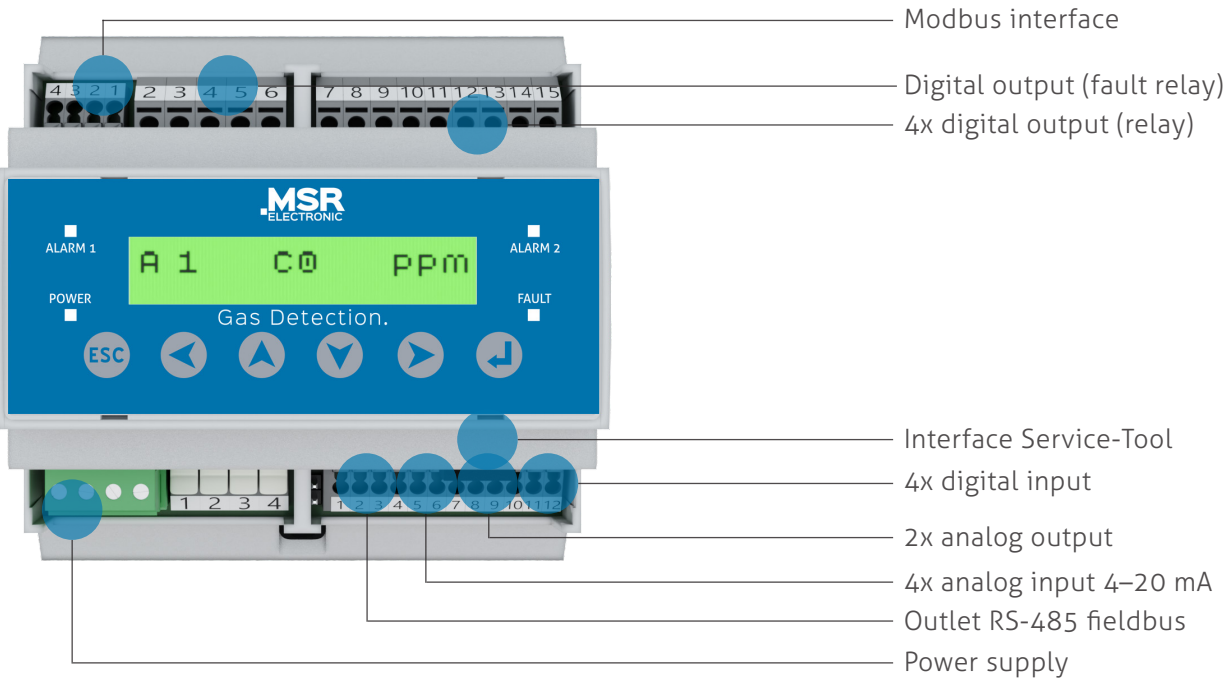
years of experience in the manufacture of controllers, professional preparation for complex approvals is guaranteed. The modular technology allows for compact yet flexible and highly efficient systems.

## Benefits

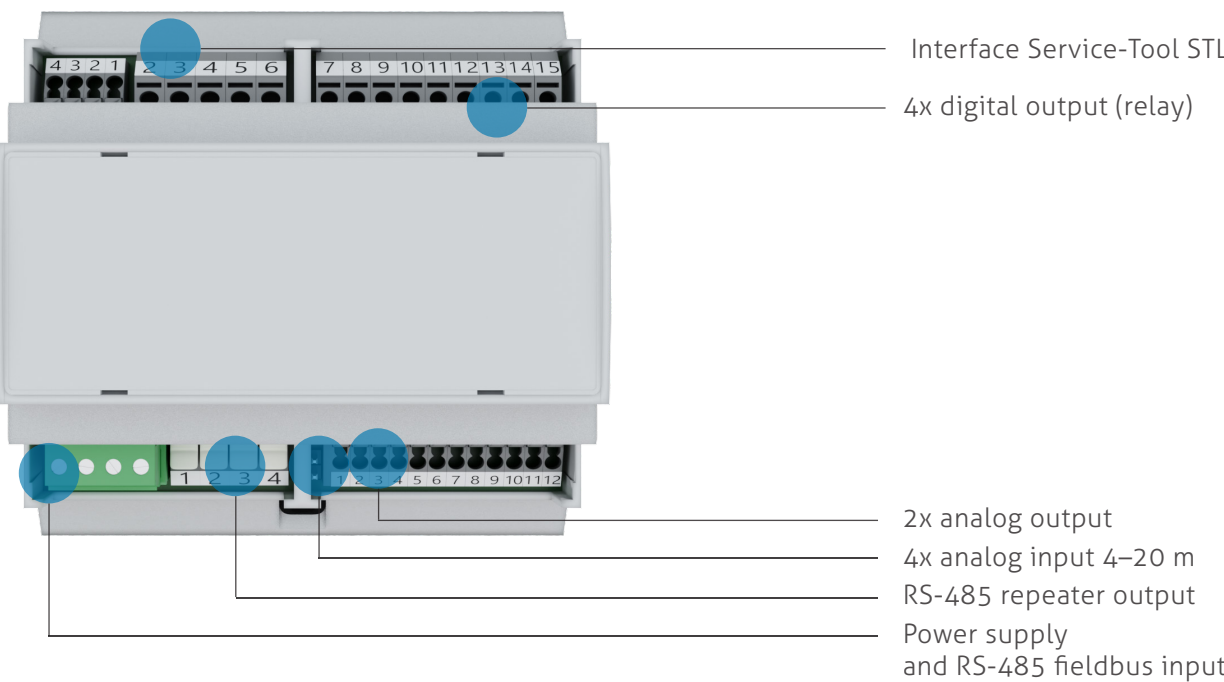
- Expansion module with
  - 4 analog inputs (4-20 mA)
  - 4 alarm relays with potential-free change-over contact
  - 2 analog outputs (4-20 mA)
- Modular design of the system possible
- Individual configuration
- Personal contact at MSR-Electronic
- Extension module for even more relays and analog inputs in the DGC



Module GC



Expansion module EP for GC Expansion module EP for GC



# Door-Entrance-Modul DEM

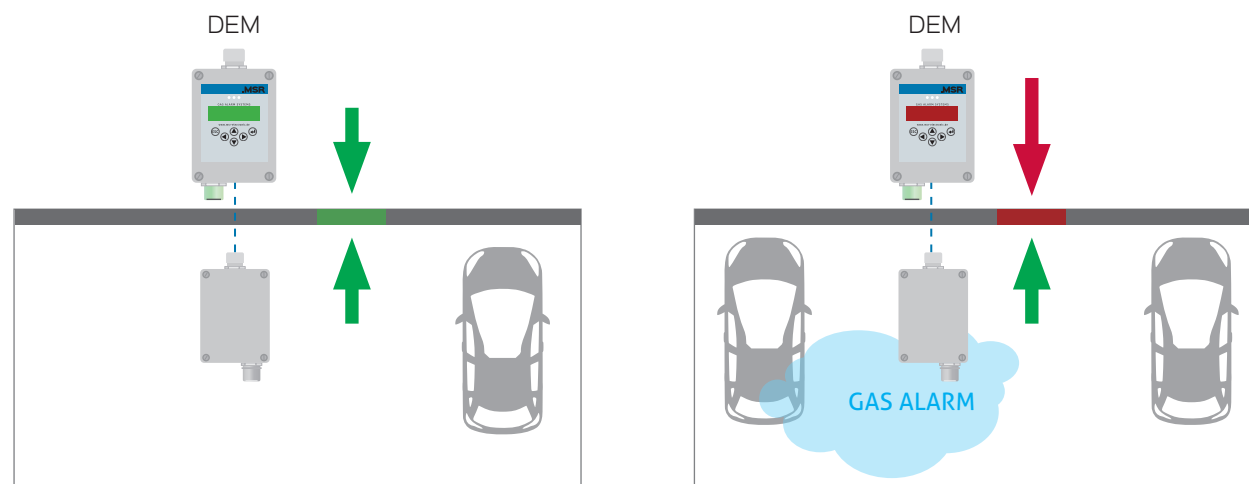
Visualizes the gas alarm in real time at all access points.

With its Door Entrance Modules (DEM), MSR-Electronic ensures maximum safety. If an increased gas concentration occurs in buildings, e.g. in parking garages, the entrances can only be opened in one direction: from the inside to

the outside. This ensures that people can only leave the hazardous area, but never enter it.

## Benefits

- Visual and audible warning
- For buildings with different hazard areas
- Stand-alone application with fieldbus information (without DGC controller) possible
- No intervention in the DGC controller system necessary
- Configurable for up to 96 sensors in a DGC controller system



No gas alarm: Display green

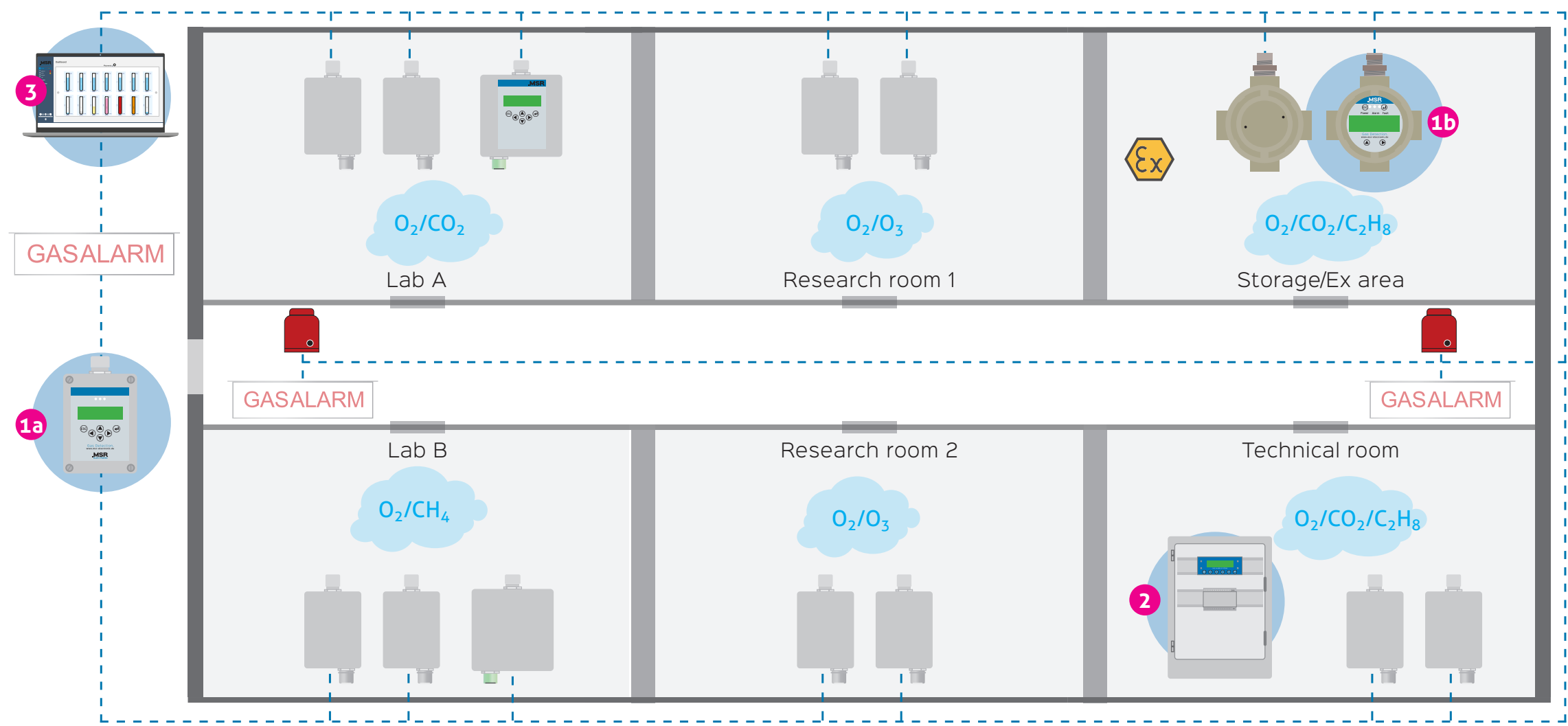
With gas alarm: Display red



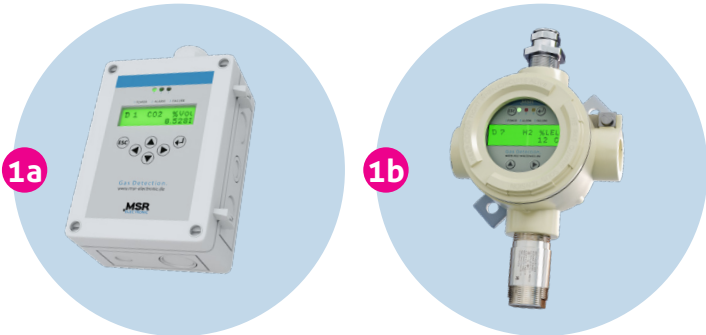


# Door-Entrance-Modul DEM

Visualizes the gas alarm in real time at all access points.



Monitoring



DEM

PX

Control



DGC

Visualizing



PGCC



## Complete control

Reduction of system downtime

## Increased safety

Lower operating costs

Predictive maintenance

## Stay informed at all times

Maximizing productivity

## Exact system status

Automatic alarm notifications

## Reduction of costly leaks



Everything at a glance via PC, smartphone, or tablet.  
Visualize, analyze, warn, alert.

Real-time data analysis is used to monitor the condition of equipment and machinery in order to predict potential failures or malfunctions.

- Improved data analysis capabilities
- Reduction in unplanned downtime
- Lower maintenance and repair costs
- Increased productivity
- Improved scheduling of service personnel

## Benefits

- Individually configurable information
- User-defined displays
- Hosting with MSR-Electronic, alternatively via virtual machine or local installation
- Real-time information such as warning and maintenance messages
- Configurable permissions
- Multiple projects in one overview
- Access via web browser or mobile devices

Give it a try

 **Demo access**

You will receive the access data for a DEMO account from your MSR contact person.





# Access control for gas warning systems

NEW

Optimal protection.

Enhanced security. Greater flexibility. Full control.

Protect your gas warning systems from unauthorized access.  
This is possible thanks to a modern password system.

## Advantages of password systems



### Customized

- ✓ Complete control over access permissions
- ✓ Securing your service portfolio
- ✓ Increased customer loyalty



### Standard

- ✓ Simplified password management
- ✓ Open software for quick customization

### 4-step password system

- |                     |                            |
|---------------------|----------------------------|
| 1 Administrator     | full control               |
| 2 Emergency service | limited access             |
| 3 System password   | configurable locally       |
| 4 Basis access      | read-only and time-limited |



# PolyXeta®

## Gas warning systems for industrial plants. ATEX Zone 1 and 2

MSR-Electronic protects health and equipment under extreme industrial conditions. In the chemical and petrochemical industry, permanent monitoring of rooms and equipment in which explosive atmospheres can form is required. The protection of persons requires constant monitoring of toxic and combustible gases and vapors. Furthermore, permanent monitoring for oxygen deficiency and excess

must be carried out. MSR-Electronic offers a wide range of methods for the permanent detection of gases. On this basis, MSR-Electronic develops customized gas sensors for industrial applications where extreme environmental conditions prevail. Safety, economic efficiency and competitiveness are the top priorities at MSR-Electronic.

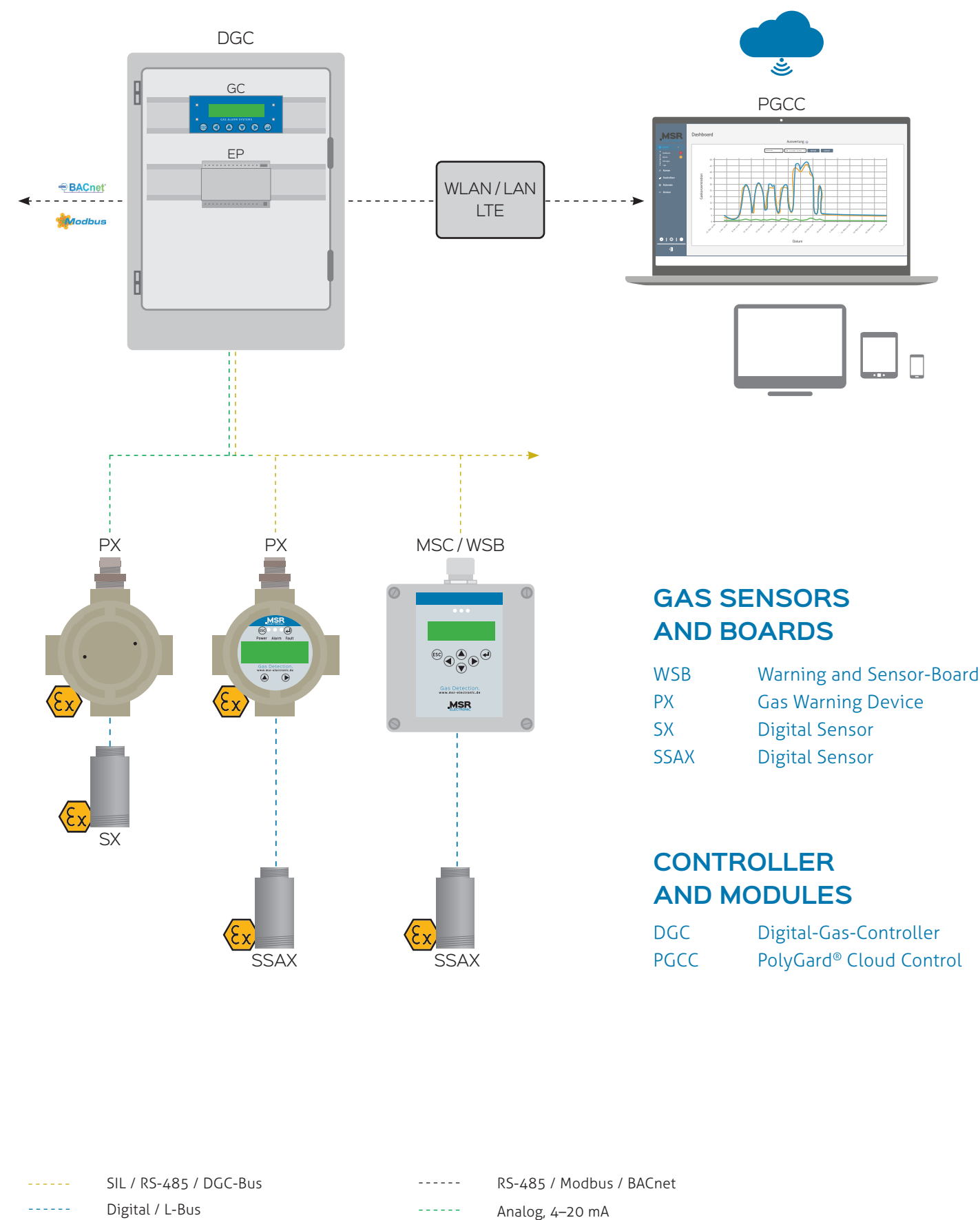
### Benefits

- **More safety**  
More than required by all national standards
- **Exchangeable sensor with X-Change technology**  
Significantly lower maintenance costs
- **Precise planning capability**  
with overall reduced costs
- **Integration in BMS/GLT (Modbus)**





# PolyXeta®



[How-to video: PX commissioning](#)



# PX with Sensor Head SX

With X-Change Technology.

- 4-20 mA and RS-485-Modbus output
- Suitable for connection to GC
- 2 relay outputs for alarm and fault relays
- Optional LC display

## Variants

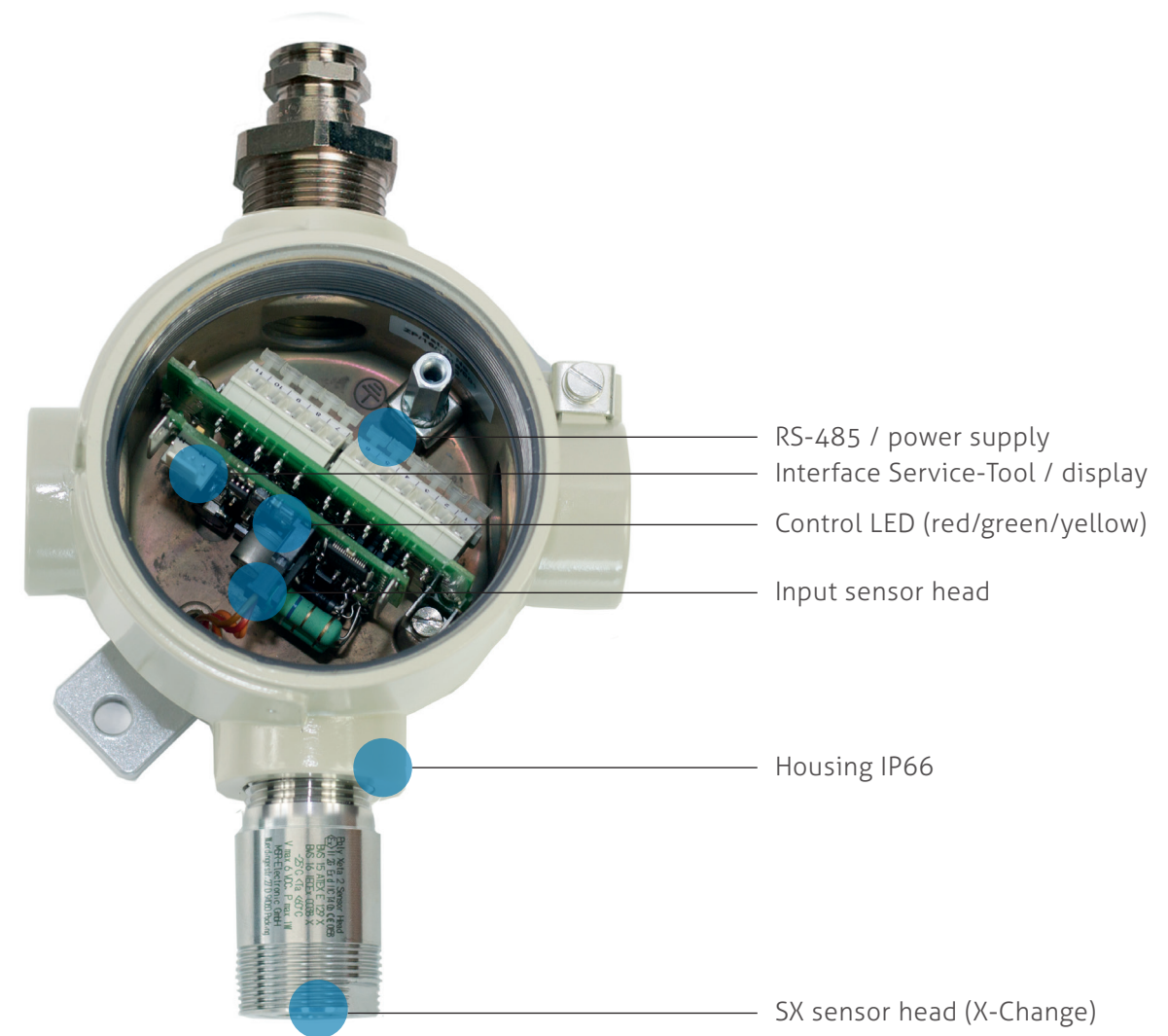
- Ex db: Ignition protection for zone 1 and 2
- Ex-ec: Ignition protection for zone 2

NEW

Also available as XL aluminum die-cast or stainless steel housing for extreme conditions with outstanding protection against corrosive influences such as salt water.

## Benefits

- Modular design
- Compatible with a wide range of BMS
- Device can be used independently of control center, stand-alone devices without DGC
- Individual parameterization possible
- Robust against dust, humidity and high/low temperatures, protection class IP66



# Sensor Head SSAX

## The ATEX sensor head for remote applications.

In addition to the high-quality sensor element and the measuring amplifier, the SSAX sensor head includes a  $\mu$ Controller for processing the measured values. All relevant data and measured values from the sensor element are stored in the  $\mu$ Controller in a fail-safe manner and are transmitted digitally via the local bus to the WSB/MS or PX. Calibration management is also integrated in the  $\mu$ Controller of the sensor head. Calibration can be carried out by simply changing the sensor head or by using the integrated,

convenient calibration routine directly on the system.

The SSAX is connected directly to the PX and can therefore be used as a complete device in the ATEX zone. In addition, the ATEX-certified SSAX sensor head can also be used on its own in the hazardous area with the corresponding ATEX cable connected to WSB/MSC or PX (which are installed outside the hazardous area) in order to evaluate the sensor there.

## Benefits

- ATEX and IECEx certificates for electrical explosion protection
- SSAX for zone 1 (can also be used in zone 2): „Ex db“ variant with pressure-resistant enclosure
- Various measuring principles depending on customer requirements and application:  
Infrared, electrochemical, pellistor, MPSTM
- High accuracy, selectivity and reliability
- Easy calibration



SENSORS + BOARDS		CONTROLLER	WARNING DEVICES	SOFTWARE
1 SSAX	3 MSC	4 Warning sign	5 PGCC	
2 PX incl. SX				



# X-Change Technology

## Recalibration with exchangeable sensor SX and SSAX.

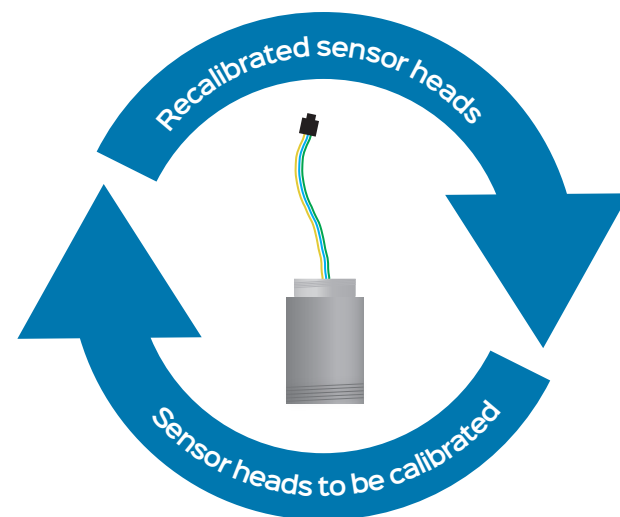
Until now, the necessary calibration of the sensors was a complex procedure and dependent on an external certified company. This involved a great deal of time and expense. The sensors had to be opened, checked, and calibrated with great care at the construction site. If a fault was

found, it was necessary to take the entire sensor away and replace it later. Thanks to the new X-Change technology, this hassle can be avoided. The exchangeable head can be replaced on site at any time. The transmitter remains untouched. This saves time and costs.

## Time-saving calibration of the gas sensors

- Significant time and cost savings
- Easy change process
- Delivery of newly calibrated sensor heads
- Increasing the safety of your plant

**MSR**  
ELECTRONIC  
and partners



Customer

 [How-to video: X-Change Technology](#)



- 1 Loosen the locking screw with an Allen key (1.5 mm) and open the housing.



- 2 Loosen the sensor cable and unscrew the used sensor head to be calibrated.  
**The yellow LED lights up.**



- 3 Replace the sensor head and connect the cable of the recalibrated head to the board.  
**The yellow LED goes out again.**



- 4 Close the housing again and the recalibrated sensor is immediately ready for use.

# Digital-Gas-Controller DGC

NEW

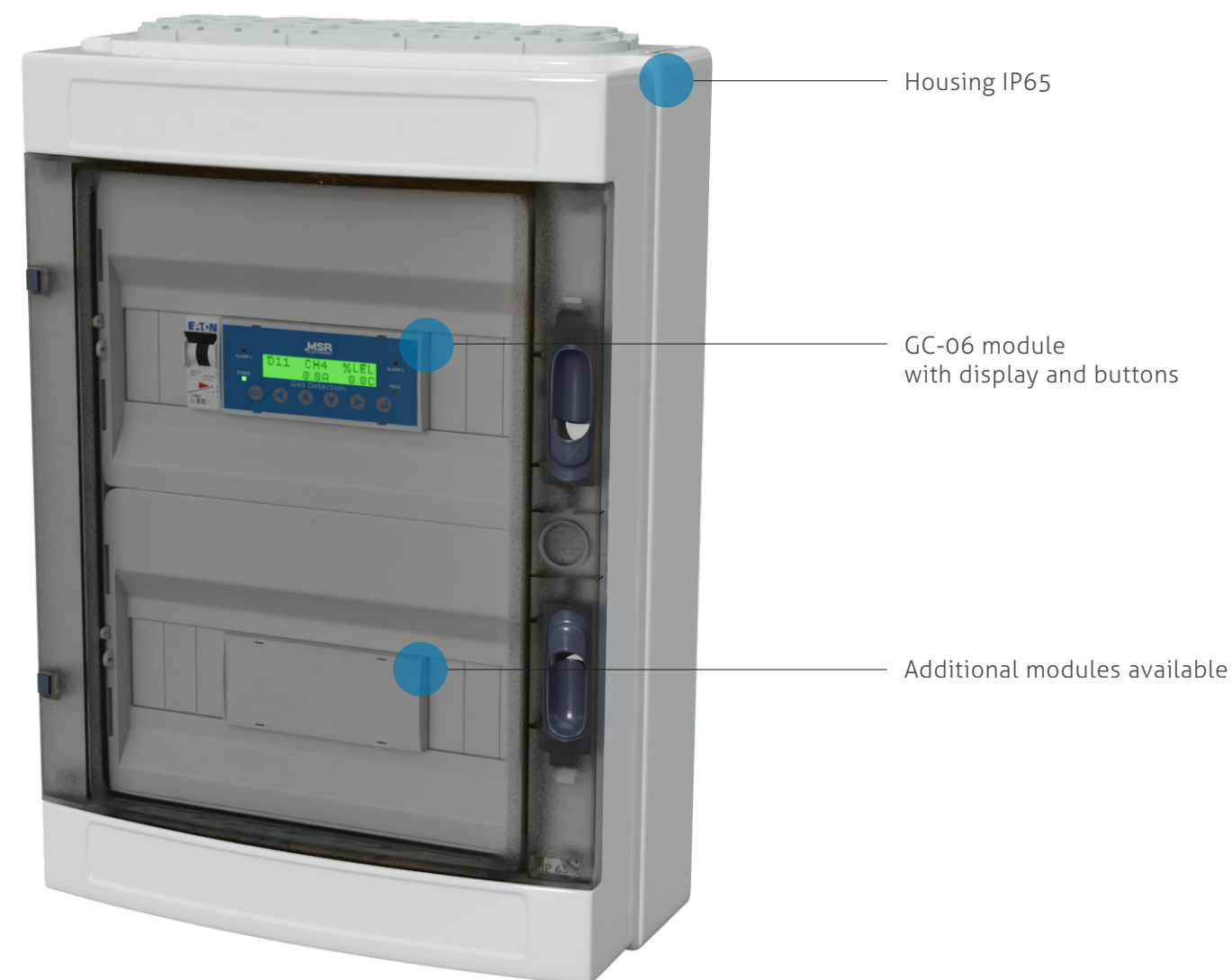
The gas monitoring center.

The Digital-Gas-Controller DGC has been developed for large systems or for extensive connections. There is hardly a scenario in gas monitoring that this controller does not cover. From complex garages to access functions that are activated by gas alarm, everything is possible. The innovative DGC gas controller series is designed in accordance with EN 50545-1 and

other standards and can monitor and evaluate up to 128 gas sensors, including 96 digital and/or 32 analog sensors (4-20 mA). Each sensor has 4 freely adjustable alarm thresholds. For alarm messages, the controller system has up to 32 relays with potential-free changeover contact and up to 16 analog outputs with 4-20 mA signals.

## Benefits

- Modular design
- Compatible with a wide range of BMS
- System can be expanded at any time, can grow modularly
- Individual parameterization possible
- Large controller that can be adapted to any situation thanks to its modular design





# Module for Controller DGC

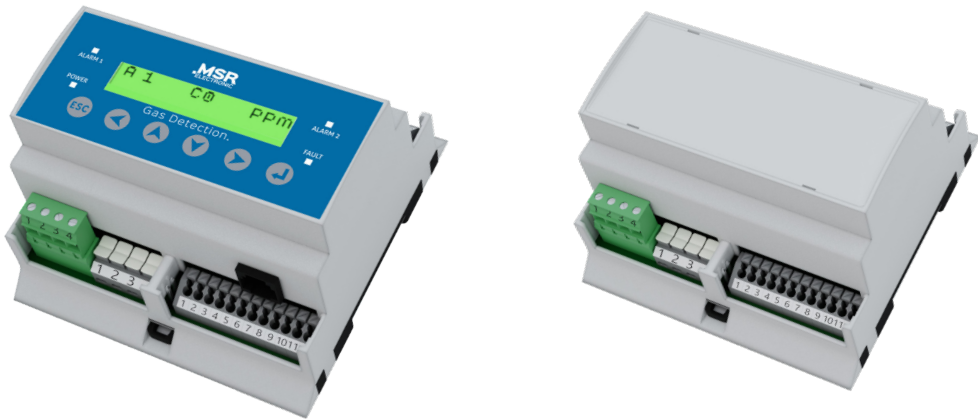
## Measuring, warning and controlling system.

The modules are designed in accordance with EN 50545-1 and can be assembled for any situation using a simple configuration. Controllers such as the GC are the core components of the systems. Expansion modules such as the EP provide additional inputs and outputs. Since MSR-Electronic has extensive certification and many

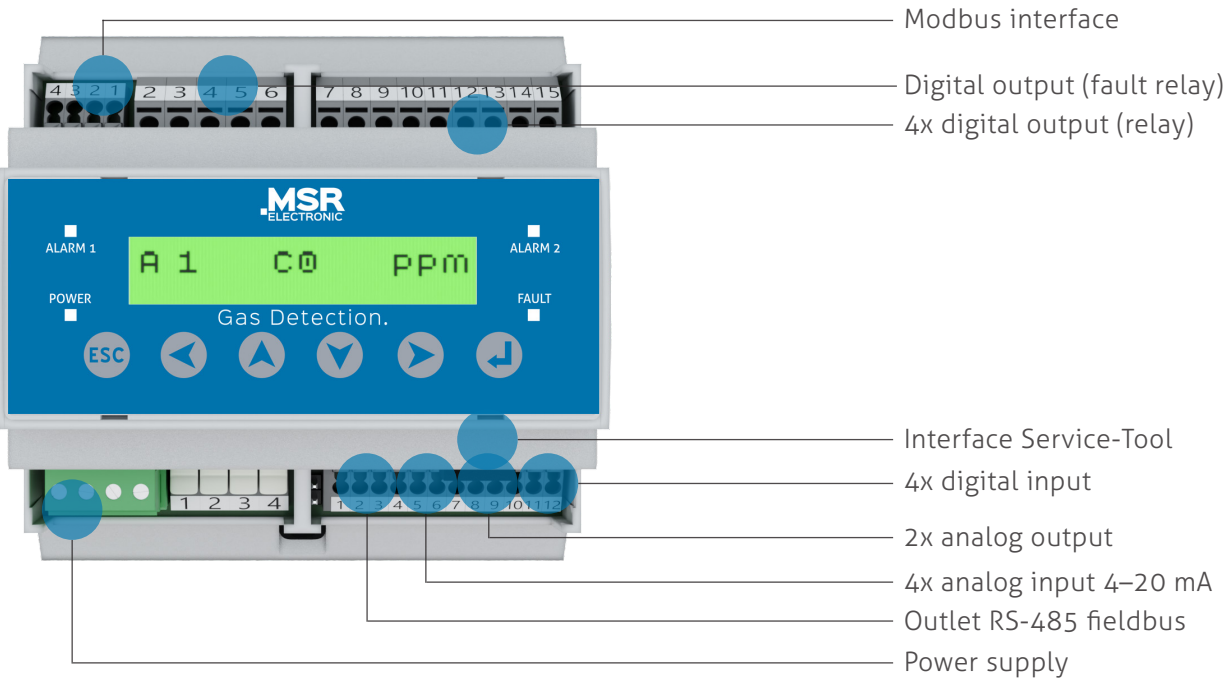
years of experience in the manufacture of controllers, professional preparation for complex approvals is guaranteed. The modular technology allows for compact yet flexible and highly efficient systems.

## Benefits

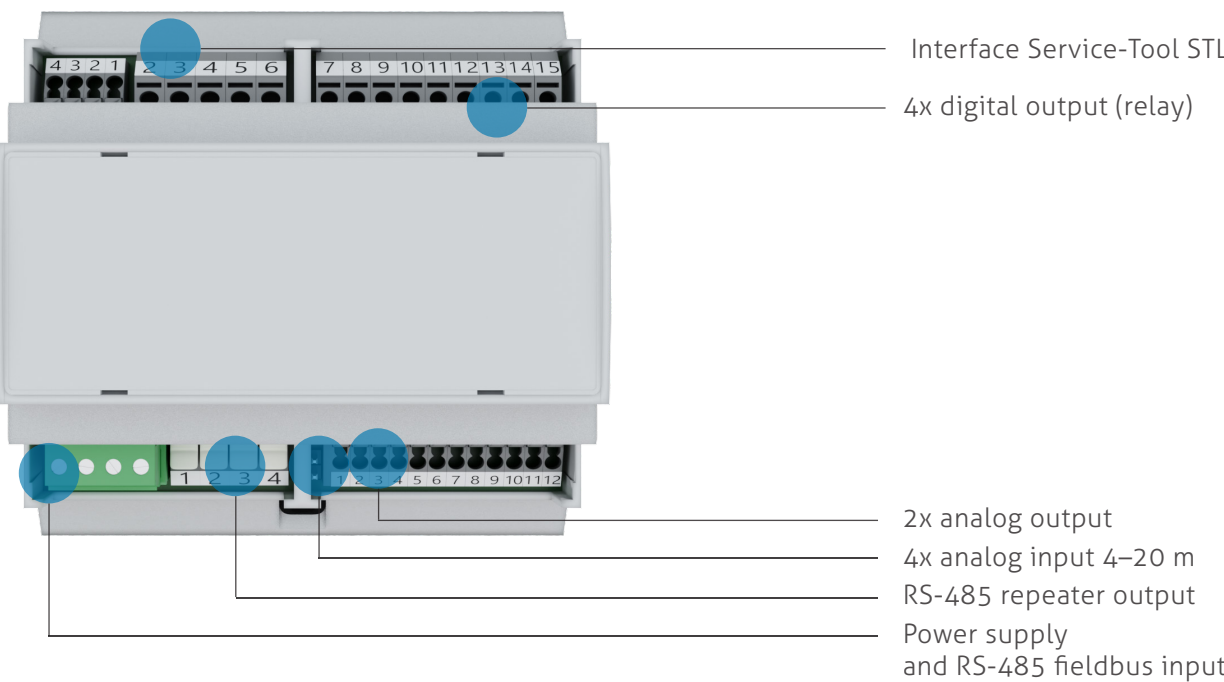
- Expansion module with
  - 4 analog inputs (4-20 mA)
  - 4 alarm relays with potential-free change-over contact
  - 2 analog outputs (4-20 mA)
- Modular design of the system possible
- Individual configuration
- Personal contact at MSR-Electronic
- Extension module for even more relays and analog inputs in the DGC



Module GC



Expansion module EP for GC Expansion module EP for GC





# PolyMarine®

## Gas warning systems for shipping and offshore.

Ships are risk areas because there is no possibility of escape. This means that hazards must be detected at an early stage in order to avert higher risks. The products from MSR-Electronic offer perfect protection against gas leaks

on board. These leaks are often not perceptible through the sense of smell or only when an accident can no longer be averted. The gas detection systems and warning devices offer reliable safety.



### Benefits

- **More safety**  
More than all national standards require
- **Exchangeable sensor X-Change technology**  
Significantly lower maintenance costs
- **Precise planning with lower overall costs**
- **Integration in BMS/GLT**  
(Analog, Modbus)





# Accessories

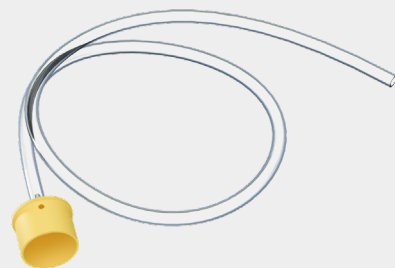
For all PolyGard®, PolyXeta® and PolyMarine® products

# Accessories PolyGard®, PolyMarine®

## Calibration adapter

For convenient calibration of the gas sensors SC and MC and for the targeted supply of zero and test gases to the sensor head.

- Suitable for all gases
- Easy handling
- Perfect coverage of the sensor head



## Flow regulator

Attachment for gas cylinders with integrated pressure reducer for regulating the volume flow rate of a gas to a predefined value.

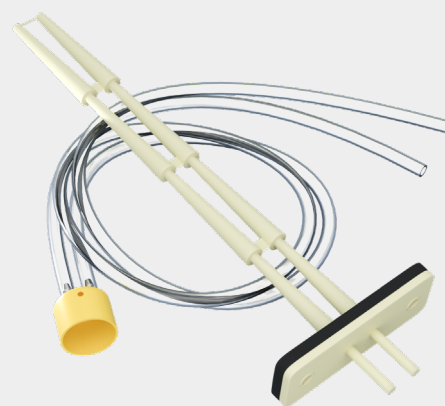
- Preset gas flow rate for optimum calibration results



## Air duct set

Individually customizable set for gas measurement in pipes.

- Flow velocity:  
min. 5 000 m/h, max. 20 000 m/h
- Duct diameter: min. 0.1 m, max. 1.0 m



## Service-Tool

Hand-held device for display, calibration, addressing and parameter changes.

- Configuration of systems
- Calibration of sensors
- Also suitable for analog sensors with adapter



## Splash protection cap

Protection against rain and splash water from all directions for the SC or MC gas sensors.

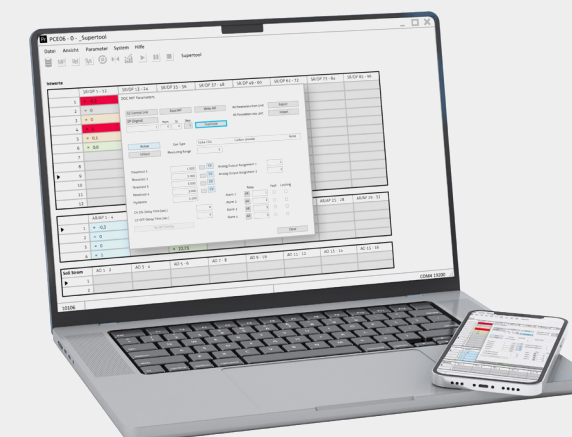
- Calibration with mounted protective cover possible using a compatible calibration adapter



## Software PCE

Autonomous and menu-driven software for convenient addressing, parameter setting and calibration of the devices.

- User-friendly design
- Recording and exporting of measured values
- No external power supply required





# Accessories PolyGard®, PolyMarine®

## Warning signs

Warning signs with individual labeling.

- Warning signs comply with international standards for font display, brightness and characters



## Warning horn / Flashing light

Can be controlled separately.

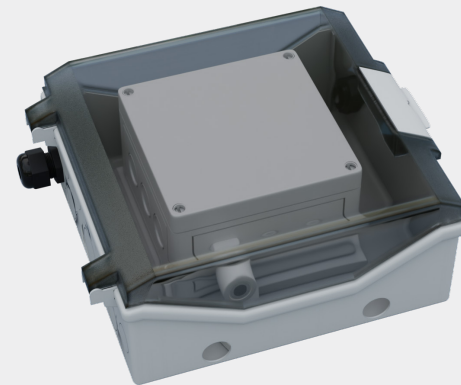
- Selectable tone
- Several color combinations available



## Water-Jet-Protection

Housing protection of sensors and controllers against water damage caused by high-pressure cleaners.

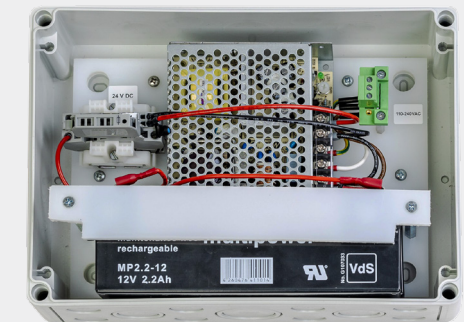
- Transparent, hinged cover
- At least IP66 (up to IP69K depending on installation)
- Can be individually adapted to the application



## Remote Accu-Package

UPS option for MSR-Electronic controllers.

- Uninterruptible power supply



## Remote-Kit

Cable extension with housing for remote mounting of SC sensors

- Simple installation
- Suitable for all SC sensors
- Available cable length: 5m / 10m



# Accessories PolyXeta<sup>®</sup>, PolyMarine<sup>®</sup>

## Magnetic pen

Magnetic pen for contactless menu operation on PX with display.

- Operating the display on the PX in the ATEX area
- No need to open the device for parameterization, calibration or display
- Gas-safe



## Splash Protection

Protection from rain, splash water and other weather influences.

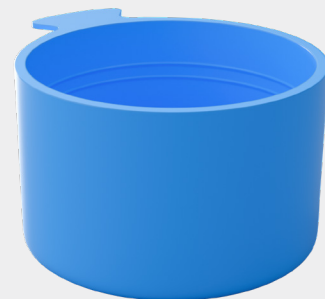
- Suitable for zone 1 and 2
- Easy installation
- Calibration possible through provided gas inlet



## Sensor Head Protection

The sensor protection cap as an option for conversion measures.

- Sensor protection during painting work or dusty renovations without destroying the sensors or without having to remove them



## Calibration Adapter

For sensor series SX and SSAX, consisting of stainless steel adapter and Viton<sup>®</sup> hose.

- Precisely fitting set to ensure the gas feed for SX and SSAX
- Essential for precise calibration





# Accessories

## CalibCase and CalibPack

Practical All-in-one system for PolyGard® and PolyXeta®.  
Perfect for use in the field.

With the calibration case or backpack, you receive all the necessary devices and accessories for commissioning, calibrating MSR-sensors and parameterizing MSR-controllers.

Packed in a compact case or backpack for convenient and safe transportation.

### Case

- Individually configurable
- Compact All-in-one case
- Secure storage for electronic and mechanical products
- IP67 when closed
- Temperature-stable from -20°C to +80°C
- Resistant to common alkalis and acids
- Eyelets for locking or sealing
- Sturdy carrying handle (foldable)

### Backpack

- Ergonomic weight distribution of the load on both shoulders thanks to padded shoulder straps
- Large capacity for additional material or for use when traveling etc.
- Large opening for easy removal of tools and laptop
- Protected inner laptop pocket for safe transportation





# Accessories

## Demo case

For the presentation of gas detectors from the PolyGard® and PolyXeta® product series.

- Try out the modularity of MSR-Electronic products for yourself
- Simple and clear demonstration of the products
- Perfectly suited for training purposes
- Experience and test products haptically
- Robust case protects products from transport damage
- Compact hand luggage size for easy transportation

### The compact demo case - DemoCase S

If you prefer a more compact version, the DemoCase S is the perfect alternative.

It provides a handy overview of devices from the PolyGard® and PolyXeta® product series and is ideal for traveling.



### The All-in-one demo case - DemoCase L

The All-In-One demo case is ideal for presenting your products to end customers in an impressive way. It contains a selection of controllers, boards and sensors, which give you a comprehensive overview of our product range.

Thanks to the integrated PolyGard® Cloud Control (PGCC), you can visualize the measurement data clearly and show the end customer live how the products work and feel.





# Applications

Customized gas detection systems for every application.

Battery monitoring

Biogas plants

Waste disposal and recycling

Garages, tunnels, and loading zones

Building monitoring

H2 – Electrolysis and storage

H2 – Mobility/charging stations

Indoor farming

Laboratory/medicine/research

Food and beverages

Aerospace

Nature conservation

Oil and gas

Process monitoring

Data centers

Shipping

Monitoring of livestock

Defense

Heat pumps

Water treatment

[Click here for the application book](#)





# MSR-Traffic

Parking Technologies: Solutions and technologies for your parking guidance system.

[Click here to visit the website](#)





# Intelligent Parking Guidance Systems

## Indoor and Outdoor.

The current occupancy status is shown on LED displays at the entrance and on each level. This allows customers to be directed straight to the next available parking space. Not only does this make it easier to find a space and reduce traffic in the parking garage or outdoor parking lot, it also saves customers valuable time.

The operator can also reduce ventilation costs by making optimal use of parking spaces. The systems for recording and counting cars entering and leaving parking garages can be used for an entire area or for individual levels.

## Benefits

- No additional maintenance costs
- Precise recording and monitoring of all parking spaces
- Significant reduction in traffic searching for parking spaces
- Minimal installation effort
- Optimization of parking space utilization
- Short amortization period for the system
- Reduction in CO<sub>2</sub> emissions
- Reduction in ventilation costs
- Suitable for indoor use
- High detection accuracy
- Sensor and status display in one housing



### 1 MAGNETO

Used for outdoor single-space detection. The wireless sensor can be installed in the middle of the parking space or on the side of the curb/sidewalk. Long service life and 98% detection accuracy.



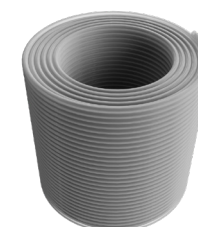
### 2 CAMO

The high-end camera for outdoor use is an innovative IoT video system. It impresses with the latest, powerful system technology and modular app support.



### 3 LED-MATRIX

The flat, modern displays can be individually configured with numbers, arrows, and symbols. They can be combined with conventional traffic signs and are optionally available with wireless communication technology.



### 4 LOOPPO

The induction or ground loop is laid as a wire coil in the subsoil. The evaluation device detects changes and controls barriers, for example, by triggering them to open or close.



### 6 SONICI

Ideal for indoor single-space detection in parking garages. Can be used for an entire area or for individual levels. Mounted below the ceiling, on plaster, or on a rail. 99% detection accuracy.



### 7 CAMI

The camera system can capture up to 3 parking spaces on 2 sides. Thanks to the integrated RGB status display, it is also easy to see which parking spaces are still available.



### 8 FLOWI

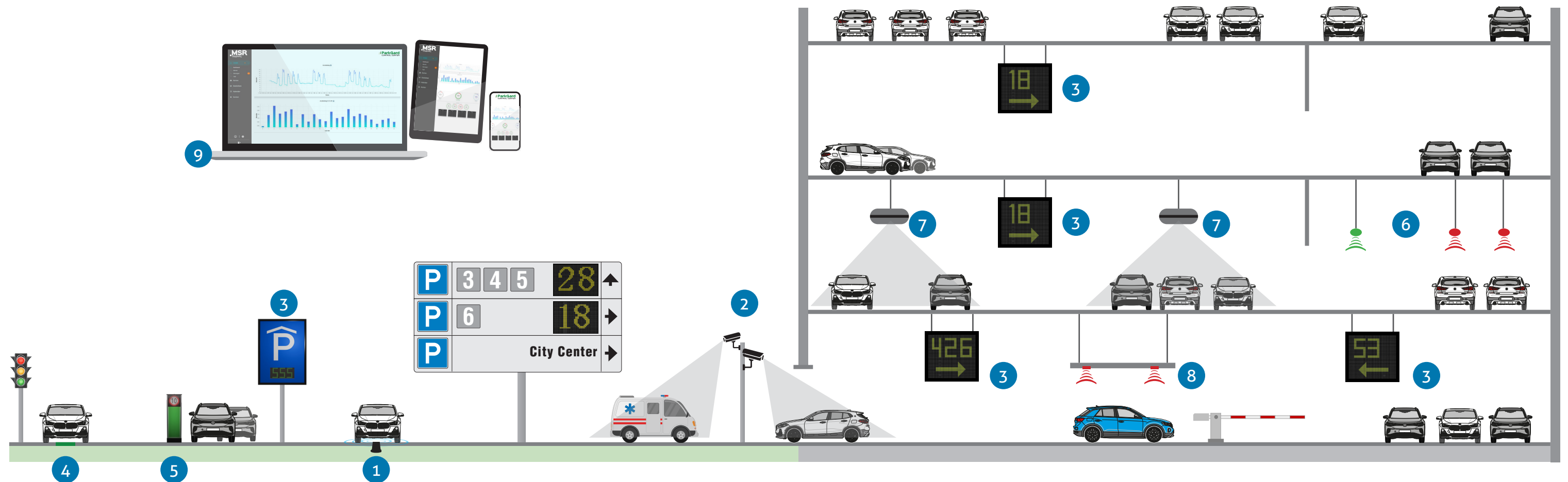
The vehicle counting sensor detects vehicles in real time and, thanks to two sensor groups, also their direction. It is mounted or suspended from the ceiling at a height of up to 3 m and is suitable for entrances and exits.



### 5 PILLAR

The LED matrix column can be individually backlit in a wide range of RGB colors, providing the right lighting for traffic signs in parking space management.

# Intelligent Parking Guidance Systems



## Capture

Magnetic field technology (1)  
 Ultrasonic technology, single (6)  
 Ultrasonic technology, counting (8)

Induction technology (4)  
 Indoor camera technology (7)  
 Outdoor camera technology (2)

## Guide

LED technology displays (3)  
 LED technology column (5)

## Evaluate

ParkGard® Control Center PGCC (9)



# PARKPLATZ

TECHNIK.SHOP

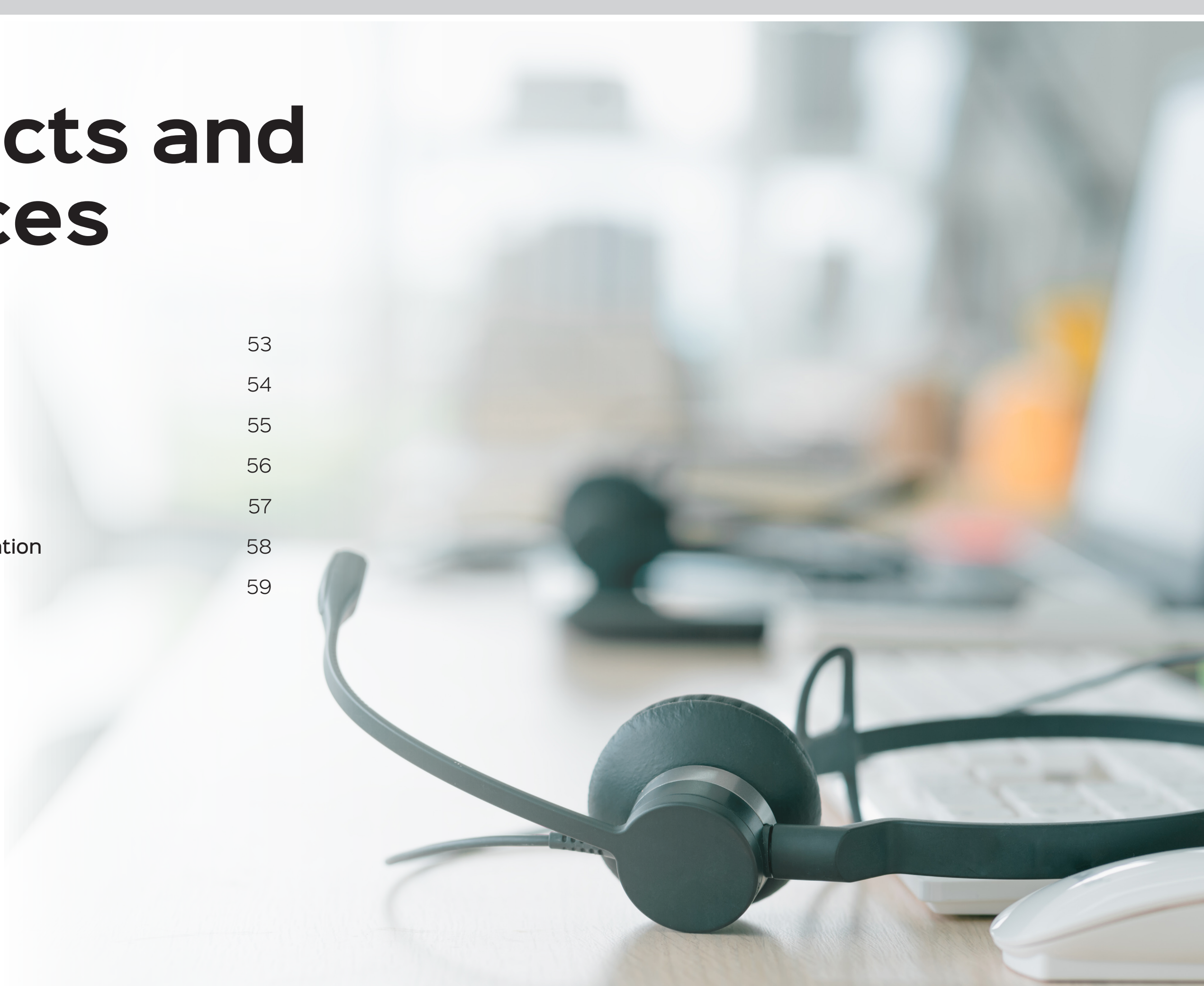
Powered by MSR-Traffic





# Products and Services

Product matrix	53
Product abbreviations	54
Webshop	55
OEM products	56
The MSR video world	57
Maintenance and calibration	58
MSR Academy	59





# Product Matrix

## Combinations

	MC Analog	SC Digital	Housing	230 V AC	WAO Warning sign	Display	Analog input	Analog output	Digital input	Relay	USV	Stand-Alone	
SB	0	3*	A, C	1	1	1	0	0	0	0	0	0	SB
WSB	1	2	A, C, E	0	1	1	1	1	1	2	0	1	WSB
MSC	3*	2*	C, E	1	1	1	2	1	2	3	1	1	MSC
DGC	32**	96 (+ SB)	1, 2, 3, 4	1	0	1	32**	16**	4**	32**	1	1	DGC

\* With restriction, see data sheet  
\*\* On controller with 7 EP modules

# Product abbreviations

AP-UPS	Remote Accu-Package
BL-24	Flashing Light
C2-Z2	Air Duct Set
C2-Z4	Calibration Adapter for MC/SC
C2-Z5	SplashGuard
C2-Z6	Calibration Adapter for MC/SC
Cal01-PX	Calibration Adapter for Polyxeta®2 Sensors
DEM	Door-Entrance-Module
DGC	Digital-Gas-Controller
EP	Expansion Module
GC	Gas-Controller
MC	Analog Sensor Head
MSC	Multi-Sensor-Controller
MSR_Pen_PX	Magnetic Pen
OT-01	Tool for Opening Stainless Steel Housing
PCE	PCE Software
PG	PolyGard®
PGCC	PolyGard® Cloud Control
PX	Sensor PolyXeta®
RB	Remote-Board
RM	Relay Module
SB	Sensor-Board
SC	Digital Sensor Head
SG-PG	SplashGuard for PolyGard® Sensors
SG-PX	SplashGuard for PolyXeta® Sensors
SP6-00	Sensor Protection / Guard Rail
SSAX	Sensor Head SSAX (PolyXeta®)
STA-MC	Converter for STL Service-Tool
STA-PX	Adapter for STL-PGX and PCE-PGX Tool
STL	Service-Tool
SX	Sensor Head SX (PolyXeta®)
WAO	Warning Unit: Visual/Audible Indicator
WH	Warning Horn
WH-24	Warning Horn, 24 V DC
WH-230	Warning Horn, 230 V AC
WH/BL-24	Warning Horn/Flashing Light Combination, 24 V DC
WH/BL-24-Tast	Warning Horn/Flashing Light Combination, 24 V DC + Button
WJP	Water-Jet-Protection
WSB	Warning and Sensor-Board
WT	Warning Sign





NEW

Quick product selection thanks to a clear series structure.

More efficiency, less effort.

With our combination products, you can order faster, easier, and without having to spend time selecting products.

All components are perfectly matched to each other - for maximum functionality and reliability.

You also benefit from shorter delivery times and an attractive price-performance ratio.

## New series structure

- S series** Central gas warning systems for complete transmitters with sensors
- M series** Flexible gas detectors for up to 3 sensors
- W series** Compact gas detection systems for smaller applications
- A series** Analog gas detectors for classic solutions
- X series** ATEX 1/2 gas detectors



# OEM Customizing and Branding

Based on the modular principle.

From a certain quantity for a product, customizing of the sensors and controllers is possible. This starts with individual lasering and individual labeling and extends to special requests for configuration and extensions.

In addition to the implementation of customer-specific requirements with regard to device approval, we support our clients in numerous industries in complying with all current national and international regulations on product safety and technical market safety requirements.

Your project team for initiation, planning, execution, monitoring and control

A specially coordinated project team will work with you to create the product requirement profile based on the modular principle. During the individual development stages, monitored by the MSR-Electronic quality management, up to the release sample (PPAP) and subsequent series production, we are in close contact with you.

**Contact us and learn more about the possibility of personalization.**

[info@msr-electronic.de](mailto:info@msr-electronic.de)



## Application

- Tunnel
- Parking garage
- Building
- Industry
- Petrochemistry
- Biogas plant
- Shipping
- And more



## Gases

- CO<sub>2</sub>
- NH<sub>3</sub>
- CH<sub>4</sub>
- And more



## More Features

- Relay
- Display
- Analog / Digital output
- Analog / Digital Input
- Modbus, BACnet
- And more



## Approvals

- EN 378
- EN 14624
- EN 50545
- EN 60079-29-1
- ATEX
- EN 60079
- And more



## Housings

- Design
- Form
- Color
- Logo
- Lettering
- IP protection class
- And more



## Montage

- Standard housing
- Remote with cable



## Accessories

- Acoustic: horn, buzzer
- Optical: Flashing light, warning sign
- And more



## Sensor

- Infrared
- Electrochemical
- Semiconductor
- Catalytic
- MPS™





# The MSR Video World

How-to explainer videos of the products on YouTube.

How-to is the keyword on YouTube. MSR- explainer videos provide brief and concise information about important details for commissioning selected products. This allows knowledge to be conveyed quickly. The fundamental advantage

of e-learning is that it can be done anywhere. In most cases, all you need is a laptop, tablet, or smartphone and an internet connection. Complex things simply explained.

▶ **Commissioning**

Warning- and Sensor-Board WSB

▶ **Commissioning**

Multi-Sensor-Controller MSC

▶ **Commissioning**

PolyXeta® PX

▶ **Recalibration**

MSR-sensors with display version

▶ **Recalibration**

MSR-sensors with Service-Tool STL

▶ **X-Change technology**

Simple exchange process PolyXeta® sensor head

▶ **X-Change technology**

Simple exchange process PolyGard® sensor head

▶ **MSR-Electronic**

Fixed gas alarm systems – Made in Germany





# Maintenance and Calibration

## Comprehensive service for your safety.

Regular maintenance is essential to ensure that gas detectors operate in accordance with the manufacturer's specifications. MSR-Electronic and its partner network carry out all necessary measures in accordance with the applicable technical standards to keep appliances in top

condition. Calibration and adjustment go hand in hand. The precise adjustment between actual and target values optimizes measurement accuracy and eliminates deviations in real time.

## Inspection and functional check

Another important part of the service offering is regular inspection, which includes a visual check of the devices for external damage and testing for signs of wear. Calibration and maintenance intervals are also checked in order to identify potential faults in good time. In addition, MSR-Electronic performs comprehensive functional checks using both zero and test gases to test the sensors and measurement value display. Deviations are corrected immediately and all results are documented in a test report.

## System checks: Safety comprehensively tested

A system check also includes safety-related tests that are specifically designed to ensure the proper functioning of all safety-critical components such as ventilation systems and alarms. These checks are carried out by qualified specialists from our partners who are trained to work in potentially explosive areas.

The personnel are comprehensively trained in both the operation of the devices and the measurement principle, and ensure that the highest safety standards are always met through regular further training with external providers and in-house at MSR-Electronic.



## Expert staff and specific expertise

MSR-Electronic and its partners rely on professionally qualified personnel who have undergone comprehensive training and have specific knowledge of gas detection technology. This includes knowledge of the handling and use of test gases as well as the calibration and adjustment of gas detectors. Additional requirements apply when working in potentially explosive areas. In addition, MSR-Electronic offers additional training courses.

## Maintenance intervals and documentation

The maintenance guidelines of MSR-Electronic are generally based on the recommendations of the BG-RTI data sheets T021/T023 as well as our own long-term tests, which result in specific intervals for the individual test measures. We recommend a visual inspection every 3 months and a display test before each shift. A functional check should be carried out every six months and a system check every year. This information differs slightly from the specifications in the data sheets and it is pointed out that the standards and regulations applicable in the respective countries and applications, where applicable, must be observed. These measures ensure that all gas detection systems remain in proper condition and that potential safety risks are minimized.

In addition, MSR-Electronic and its partners offer complete documentation of all inspections, adjustments, calibrations and function checks carried out to ensure traceability and transparency. These regular inspections and written documentation are particularly important in safety-relevant industries such as the chemical, petrochemical and pharmaceutical industries, but also in the marine sector.



# MSR-Academy

User knowledge directly from the manufacturer.

MSR-Electronic is a provider of the latest safety technology in the field of gas detection. In-depth knowledge of applications, products, maintenance and legal regulations is required to ensure that the systems meet the high demands of customers.

MSR-Electronic offers customers the opportunity to take part in a **BASIC or SALES** webinar as well as a two-day **ADVANCED training** course in Pocking. They experience the technology up close

and get to know the gas warning system in detail in discussions with technology and development experts. This means that errors can be avoided right from the design stage of the system and the customer can be offered a reliable gas detection system.

The training will cover our current product series as well as legal innovations, such as the European standard EN 50545-1 for garages and tunnels.

## Benefits

- Free premium support code\* with regular training participation
- Precise product knowledge from the MSR product family
- News from the gas warning technology
- Mediation of complex application examples
- Close exchange with MSR development and support
- After successful training, fault messages are recognized and eliminated more quickly

**The MSR-Academy supports the establishment of a professional customer service and thus offers the possibility of faster processing of day-to-day business.**

\* Each participant receives a premium support code after attending the ADVANCED training:  
With the code you get free premium support from our technicians for 18 months.





Global Experts in Gas Detection.



With a worldwide partner network and its own branches around the globe.



[www.msr-electronic.de](http://www.msr-electronic.de)

We are part of the MSR-Group.